MATHS MELA

Textbook of Mathematics for Grade 4

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NCERT

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Foreword

The Foundational Stage in school education, as envisaged by the National Education Policy 2020, serves as the cornerstone for the holistic development of children. It enables them not only to imbibe the invaluable samskaras rooted in our country's ethos and constitutional framework, but also to acquire basic literacy and numeracy. This foundation equips them to transition seamlessly into the more challenging Preparatory Stage.

The Preparatory Stage acts as a bridge between the Foundational and the Middle Stages, spanning three years from Grade 3 to Grade 5. The education provided during this stage builds upon the pedagogical approaches of the Foundational Stage. While the play-way, discovery, and activity-based learning methods continue, children are also introduced to textbooks and more formal classroom settings. This introduction aims not to overwhelm but to establish a foundation across curricular areas, promoting holistic learning and self-exploration through reading, writing, speaking, drawing, singing, and playing. This comprehensive approach encompasses physical education, art education, environmental education, languages, mathematics, basic science, and social science. This comprehensive approach ensures children are well-prepared both at the cognitive sensitive and physical-pranic (emotional) levels to effortlessly transition to the Middle Stage.

The textbook, *Maths Mela* for Grade 4 is meticulously designed to align with these objectives. It adheres to the recommendations of the National Education Policy 2020 and the National Curriculum Framework for School Education 2023. The textbook emphasises conceptual understanding, critical thinking, creativity, values and dispositions essential for this developmental stage. It incorporates cross-cutting themes such as inclusion, multilingualism, gender equality, and cultural rootedness integrating appropriate ICT and school-based assessments. The engaging content and activities are designed to captivate students and encourage peer group learning, thus enriching the educational experience for students as well as teachers.

It is crucial to remember the pedagogical focus of the textbook emphasising understanding, critical thinking, reasoning, and

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decision making. Children's innate curiosity at this stage should be nurtured by addressing their questions and designing activities based on core learning principles. While the play-way method continues, the nature of toys and games used for teaching evolves to enhance engagement rather than mere attraction.

While this textbook is valuable, children should also explore additional resources on the subject. School libraries should facilitate this extended learning, and parents and teachers should support their endeavours.

An effective learning environment motivates students, keeping them engaged and fostering curiosity and wonder vital for learning.

With confidence, I recommend this textbook to all students and teachers at the Preparatory Stage. I extend my gratitude to everyone involved in its development, hopeful that it will meet expectations. As NCERT remains committed to systemic reforms and improving publication quality, we welcome feedback to refine the textbook content.

DINESH PRASAD SAKLANI
Director
National Council of Educational
Research and Training

New Delhi
15 March 2025

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About the Book

The book *Maths Mela* for Grade 4 has been developed based on the recent documents National Education Policy (NEP) 2020 and National Curriculum Framework for School Education (NCF-SE) 2023. They aim to ensure that all children achieve basic numerical skills and abilities to think mathematically and logically, solve problems, develop intuitions regarding quantities and reasons, and feel a sense of joy, wonder, and curiosity. The Preparatory Stage specifically focuses on the development of conceptual ideas about numbers, shapes, and spatial relationships, measurement and data handling, procedural skills and fluency and computational thinking.

In light of this, the book for Grade 4 is designed to support learners consolidate their learnings in the Foundational Stage and make progress towards dealing with more abstract ideas. The chapters of the book cover the foundational ideas of Mathematics: whole numbers and operations, fractions, shapes and spatial relationships, measurement (length, weight, capacity, and time), and data handling. Chapters are woven around certain themes so as to engage children with the ideas and their applications. Ideas will keep recurring throughout the book building in deeper engagement and complexity to suit the interest and curiosity of the growing child.

We firmly believe that young learners are capable of reasoning, thinking and problem solving in different ways. Therefore, the book provides several occasions for identifying and noticing ideas and relationships across ideas, giving examples and counter-examples to statements, creating objects using mathematical ideas, measuring and quantifying, estimating and solving problems. There are also opportunities to hone one's arithmetic skills through basic exercises, games, and puzzles. At some places in the chapter, such opportunities have been provided under the section 'Let us Play'. Another important purpose behind games and puzzles is to provide learners a stress-free and joyful learning. Most of these need not be assessed. Some tasks are aimed towards 'computational thinking' where learners are expected to observe and articulate patterns and find exhaustive solutions and solutions under different constraints.

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We also believe that learners should develop a liking for Mathematics. The chapters of this textbook provide several enjoyable activities, tasks, games, and puzzles that build on children's intuitions and tap on to their experiences in the world around them. These have been given under the section 'Let us Do' at many places in the chapters. These are sometimes used for making an entry to the concept and at other times provide opportunities to consolidate the ideas. The narrative in the chapters is supported through vivid illustrations, which are also integral to the tasks. We hope that this will allow learners to read pictures and use them for developing important mathematical ideas. Mathematical vocabulary and ways of communicating about mathematics has been emphasised throughout the chapters. We continue to provide instructions and explanations with as little language as possible.

Mathematics is an integrated body of knowledge, with a connected and coherent set of ideas. It can be built logically on commonly shared assumptions. Mathematical thinking and reasoning are an important part of learning mathematics. The book attempts to move away from rote memorization of rules and procedures which kills learners' curiosity and burdens them. It rather pushes learners to explore and discover important mathematical ideas. The sections named 'Let us Think', 'Let us Explore', and 'Let us Discuss', included at various places, aim at keeping learners curious to reason out their thinking. These will give them reasons and insights that can be used to remember ideas and apply ideas flexibly and creatively, making further learning easier. It is important to engage with these processes of Mathematics so that learners can go beyond routine mathematical problems confidently and without fear and anxiety. We hope that the carefully chosen learning activities will help them make sense of the ideas, develop capacities to solve problems, experience wonder and joy in the process, and be curious about the world of mathematics. In addition to all of these, with growing capacities of children we have introduced a new section called "Let us Solve". These sections aim to help children develop their skills in using procedures, solving routine problems and word problems.

We believe that the time available for children to work on problems and share their solutions and ideas will be crucial to achieve the objectives of NEP 2020 and NCF-SE 2023. The book carries several suggestions for appropriate activities and experiences (in class and in and around the home) to develop mathematical ideas.

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Teachers' and parents' support in changing conditions of learning for our children will be very important to achieve the dreams of a better and more confident nation.

The book also advises on the making of simple inexpensive concrete materials for learners to work with, and develop and communicate their thinking. Perforated sheets for some of the tasks in the chapters are provided at the end of the book. There are some more ideas in the 'Note for Teachers' for activities and materials. The chapters also show a gradual movement from the use of materials to the use of pictures and making schematic diagrams to make sense of the situation and identify better strategy. The book tries to build models for the ideas using materials and pictures so that learners can use them to develop independent thinking. We would sincerely urge teachers and parents to use the sequence of ideas suggested in the book for teaching and gradually arrive at more formal rules and procedures. When children develop a better understanding, they will be in a better position to appreciate the rules and procedures. Similar care should also be taken by parents and older siblings who may help their wards in learning through this book. The 'Note for Teachers' may help teachers and parents in appropriately enhancing the child's learning.

Several activities and tasks in the book also require that children talk and discuss their ideas. Learning will significantly improve in a classroom that welcomes and respects learners' ideas. They will see different ways of thinking, use ideas, and find alternative solutions leading to better and independent solutions over a period of time. They will get opportunities to scrutinise each other's solutions and develop fluency with mathematical language, symbols, and procedures. These will also serve as good assessments of learning for the teacher and also provide feedback to them. The exercises given in the book are also examples of how learners can be assessed. Assessment should be done in multiple forms— using materials and pictures, problem situations and basic problems, activities, creating objects, and sharing and explaining solutions. The book provides enough opportunities for adaptive assessment, assessment for learning, and assessment as learning while the child is engaged in different activities. Teachers can note down their observations while the learners discuss their ideas, replying to the questions asked, and explaining the reasoning for their answer. Such records can be included in the learner's portfolio. Chapters have more paper

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and pen tasks in Grade 4 (questions, word problems, and projects) that a child can complete in the classroom or at home. Such tasks provide opportunities to practice writing and present their thinking on paper.

In the times to come, we will provide more resources to the teachers and learners in the form of videos, worksheets for practice, and links to online resources.

We hope that the book will be enjoyable to all and will lead to better teaching-learning conditions.

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THE CONSTITUTION OF INDIA

PREAMBLE

WE, THE PEOPLE OF INDIA, having solemnly resolved to constitute India into a [1]**[SOVEREIGN SOCIALIST SECULAR DEMOCRATIC REPUBLIC]** and to secure to all its citizens :

JUSTICE, social, economic and political;

LIBERTY of thought, expression, belief, faith and worship;

EQUALITY of status and of opportunity; and to promote among them all

FRATERNITY assuring the dignity of the individual and the [2][unity and integrity of the Nation];

IN OUR CONSTITUENT ASSEMBLY this twenty-sixth day of November, 1949 do **HEREBY ADOPT, ENACT AND GIVE TO OURSELVES THIS CONSTITUTION.**

---

1. Subs. by the Constitution (Forty-second Amendment) Act, 1976, Sec.2, for "Sovereign Democratic Republic" (w.e.f. 3.1.1977)
2. Subs. by the Constitution (Forty-second Amendment) Act, 1976, Sec.2, for "Unity of the Nation" (w.e.f. 3.1.1977)

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CONSTITUTION OF INDIA

Part III (Articles 12 – 35)
(Subject to certain conditions, some exceptions
and reasonable restrictions)

guarantees these

Fundamental Rights

Right to Equality

- before law and equal protection of laws;
- irrespective of religion, race, caste, sex or place of birth;
- of opportunity in public employment;
- by abolition of untouchability and titles.

Right to Freedom

- of expression, assembly, association, movement, residence and profession;
- of certain protections in respect of conviction for offences;
- of protection of life and personal liberty;
- of free and compulsory education for children between the age of six and fourteen years;
- of protection against arrest and detention in certain cases.

Right against Exploitation

- for prohibition of traffic in human beings and forced labour;
- for prohibition of employment of children in hazardous jobs.

Right to Freedom of Religion

- freedom of conscience and free profession, practice and propagation of religion;
- freedom to manage religious affairs;
- freedom as to payment of taxes for promotion of any particular religion;
- freedom as to attendance at religious instruction or religious worship in educational institutions wholly maintained by the State.

Cultural and Educational Rights

- for protection of interests of minorities to conserve their language, script and culture;
- for minorities to establish and administer educational institutions of their choice.

Right to Constitutional Remedies

- by issuance of directions or orders or writs by the Supreme Court and High Courts for enforcement of these Fundamental Rights.

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Constitution of India

Part IV A (Article 51 A)

Fundamental Duties

It shall be the duty of every citizen of India —

(a) to abide by the Constitution and respect its ideals and institutions, the National Flag and the National Anthem;

(b) to cherish and follow the noble ideals which inspired our national struggle for freedom;

(c) to uphold and protect the sovereignty, unity and integrity of India;

(d) to defend the country and render national service when called upon to do so;

(e) to promote harmony and the spirit of common brotherhood amongst all the people of India transcending religious, linguistic and regional or sectional diversities; to renounce practices derogatory to the dignity of women;

(f) to value and preserve the rich heritage of our composite culture;

(g) to protect and improve the natural environment including forests, lakes, rivers, wildlife and to have compassion for living creatures;

(h) to develop the scientific temper, humanism and the spirit of inquiry and reform;

(i) to safeguard public property and to abjure violence;

(j) to strive towards excellence in all spheres of individual and collective activity so that the nation constantly rises to higher levels of endeavour and achievement;

*(k) who is a parent or guardian, to provide opportunities for education to his child or, as the case may be, ward between the age of six and fourteen years.

Note: The Article 51A containing Fundamental Duties was inserted by the Constitution (42nd Amendment) Act, 1976 (with effect from 3 January 1977).

*(k) was inserted by the Constitution (86th Amendment) Act, 2002 (with effect from 1 April 2010).

Chapter 1

Shapes Around Us

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Diksha wanted to go to a big city during her summer holidays. Her father took her to Delhi and they visited many old and new interesting monuments like the India Gate, Qutub Minar, Safdarjung Tomb, Akshardham, the National Museum, Jantar Mantar and Sansad Bhawan.

Now she is trying to make a model of India Gate using her wooden blocks.

Try to make a model of the buildings shown here using blocks.

1. What parts of the building have you shown in your model (for example, roof, pillars, base, etc.)?
2. Why did you select these parts?
3. What shapes will model these parts well?_____
4. How is your model similar to the picture of the real building? _____
5. How is it different from the real building? _____

Discussion: What would happen if you removed one piece of your model?

- Would the model still look like the original building?
- In what ways could you make the model even better?

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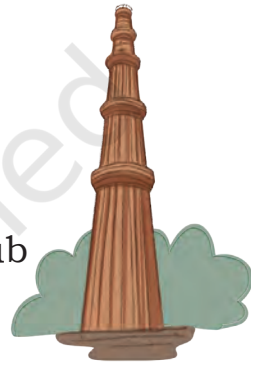
Project Work

Encourage learners to observe a street carefully and make a model showing the main buildings on the street.

I have made something. Look at my Qutub Minar.



Do you think it looks like the Qutub Minar?.....

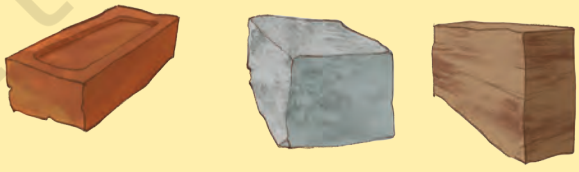
What shape would you use if you made a model of the Qutub Minar? Why?.....

How many such shapes will you use? .....

Do you know: The Qutub Minar is a World Heritage site and the tallest building made up of bricks. It has 5 storeys and 379 stairs.

Earlier, people made buildings with clay bricks, stone blocks or wood. Today we also use concrete blocks, hollow blocks, etc.

What is common to all of these bricks? .....



Note for Teachers: Ask learners to collect different boxes, bottles, cans, coconut shells, etc., to model the given buildings.

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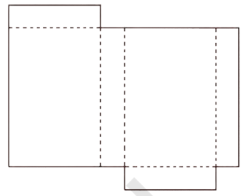
Craft

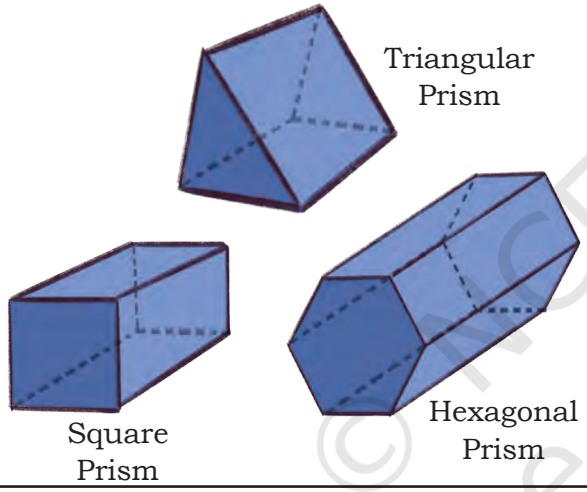
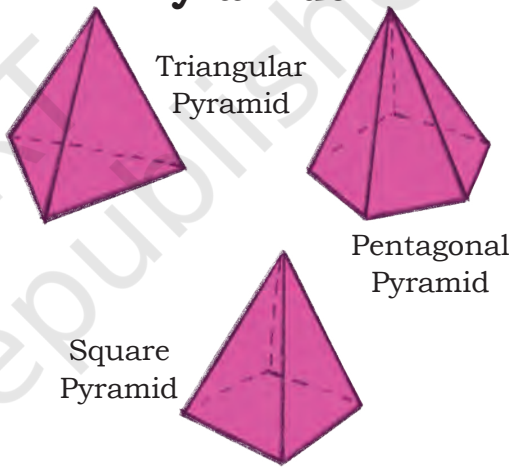
1. Make a sphere-like shape with paper strips.

Diksha has folded open and flattened a box to see what an open box looks like. This is called the *net* of the box. If you fold along the dotted lines, you will get the box back.



Net of a box

2. Use the *nets* given at the end of the book to make the models shown below.

Prisms	**Pyramids**
	
What shape of face is common to all the prisms? _____ What other shapes do these prisms have? _____ How many such faces each? _____	What shape of face is common to all the pyramids? _____ All the triangular faces meet at _____ point. Identify any other shape in each of the pyramids _____

Is a cube also a prism?

What is the difference between a prism and a pyramid? Discuss.

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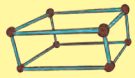
3. Now try to make the above shapes using straws and plasticine/ thread and fill in the table.

Shapes	Number of faces (F)	Number of corners (V)	Number of edges (E)
Cube/Square Prism			
Cuboid/Rectangular Prism 			
Triangular Pyramid			
Square Pyramid			
Triangular Prism			

Identify any relationship that you may find between the number of faces (F), edges (E), and corners (V). Calculate F+V–E in each case. What do you notice?

Sort 3D shapes by the number of flat faces. Write their names here.						
Number of faces	1 flat face	2 flat faces	4 flat faces	5 flat faces	6 flat faces	8 flat faces
Name of the shape						

Can you construct a 3D shape with 3 flat faces?

Now sort 3D shapes by the number of straight edges. Write their names here.				
Number of edges	6 straight edges	8 straight edges	9 straight edges	12 straight edges
Name of the shape				

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Let Us Observe

1. Take a die. Look at the face that has number 1. The face numbered 6 is opposite to the face numbered 1.

   What is the face opposite to the

   a) face numbered 2? .....

   b) face numbered 3? .....

   c) face numbered 4? .....

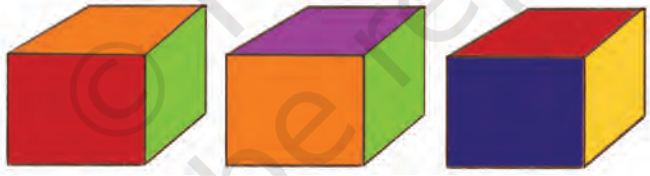
2. a) Which faces have common edges with the face numbered 1? .....

   b) Which face has no common edge with the face numbered 1? .....

3. Look at three different views of the same cube.

   a) What colour is the face that is opposite to the red face? .....

   b) What colour is the face that is opposite to the yellow face? .....



Follow these instructions for the shapes along the border.

1. Colour all shapes with a rectangular face in red.
2. Draw a smiley on shapes with a triangular face.
3. Draw a star on shapes with a curved face.
4. Colour all shapes with no corner in blue.
5. Circle the shapes that have the same opposite faces.

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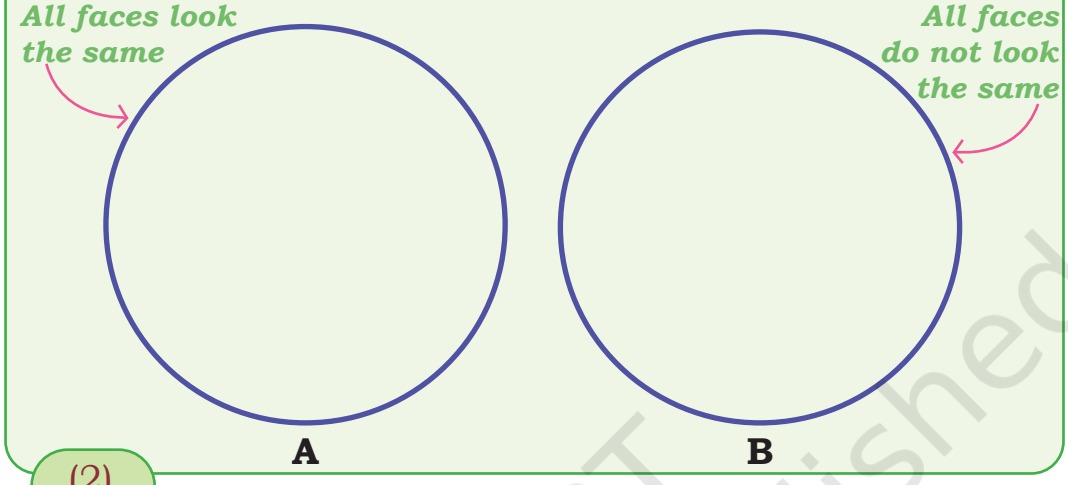
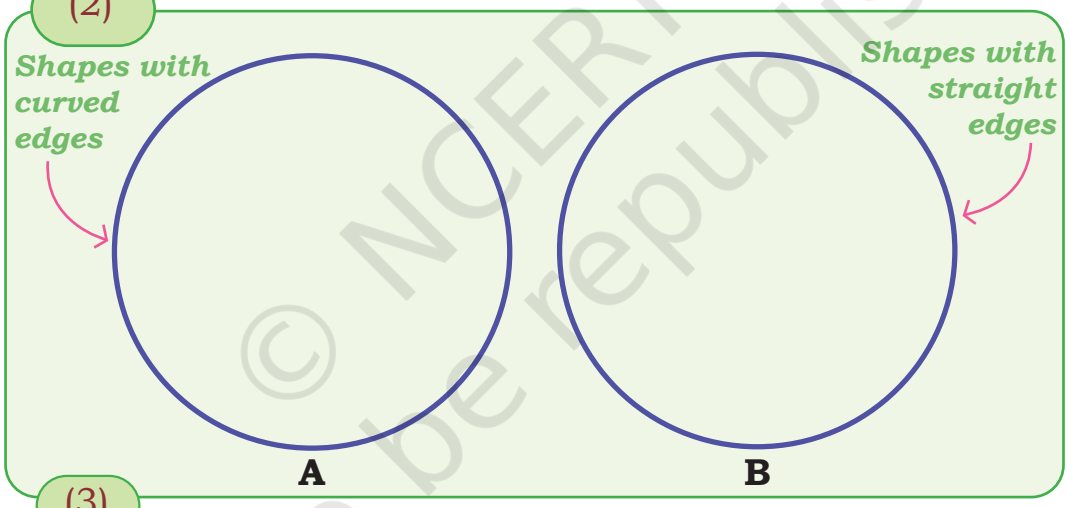
Sorting 3D Shapes

Write the names of 3D shapes in the correct places.

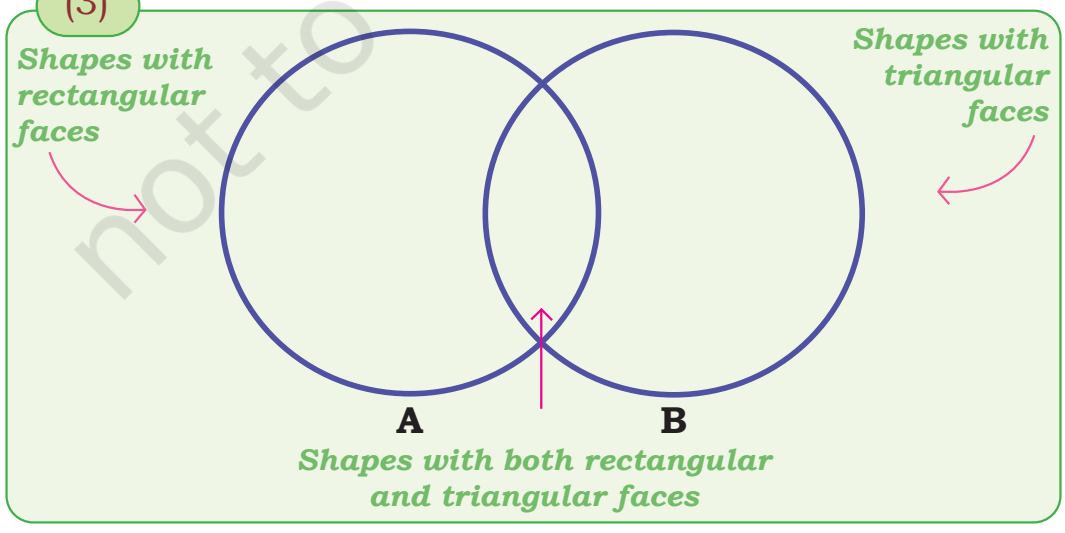
(1)



(2)



(3)



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In which circle did you write triangular prism and rectangular pyramid?

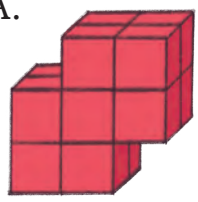
Let us sort shapes in another way.

Using circles like those on the previous page, can you sort shapes into the categories “Shapes with curved faces” and “Shapes with flat faces”?

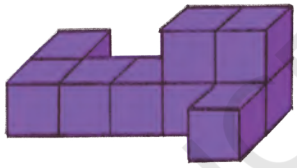
Build with Cubes

Build these models with the cubes from the *Jaadui Pitara Kit* or any other similar material.

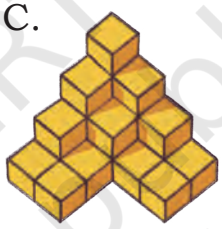
A.



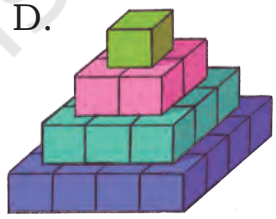
B.



C.

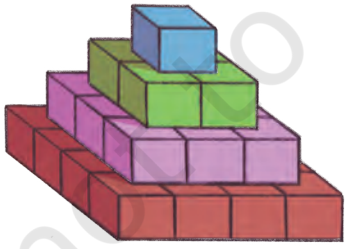


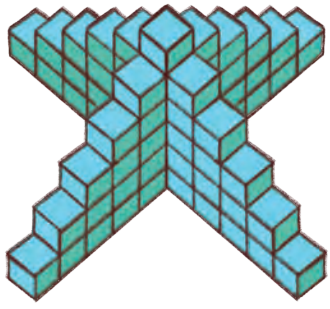
D.



Cube Towers

How many cubes are there in each of these cube towers?





Note for Teachers: Use the available wooden, paper, and straw models. Discuss adjacent and opposite faces. Discuss shapes that fall into two sets. Let them make Venn diagrams (using circles like above) and write the names of these shapes.

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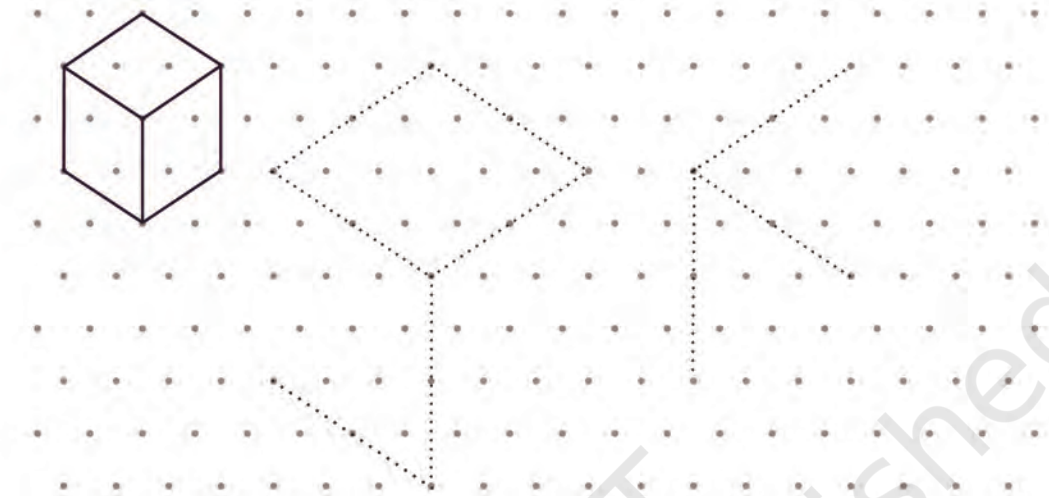
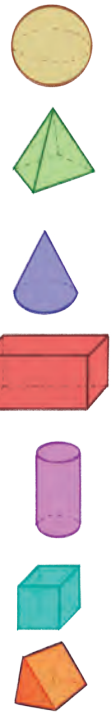
Drawing Cubes on a Triangular Dot Paper

Can you complete the following cubes?



1. Match the pictures to the descriptions and name the shapes.



   a) I have 5 faces and 5 corners. I have 8 edges. 1 of my faces is a square and 4 of my faces are triangles.....

   b) I have 1 flat face, 1 curved face, and 1 edge.....

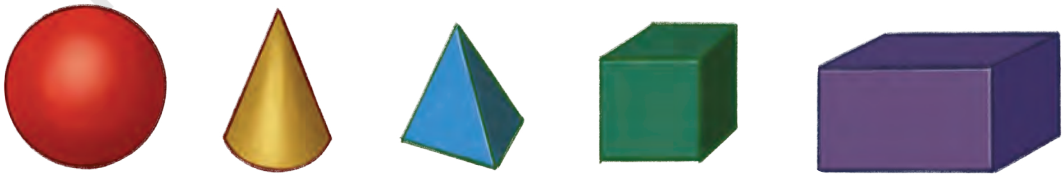
   c) I have 1 curved face. I have no edges or corners.....

   d) I have 2 flat faces, 1 curved face, and 2 edges. I have no corners.....

   e) I have 5 faces, 6 corners, and 9 edges, and 2 of my faces are triangles.....

   f) I have 6 faces, 12 edges, and 8 corners.....

2. Each one is different. How? Discuss.



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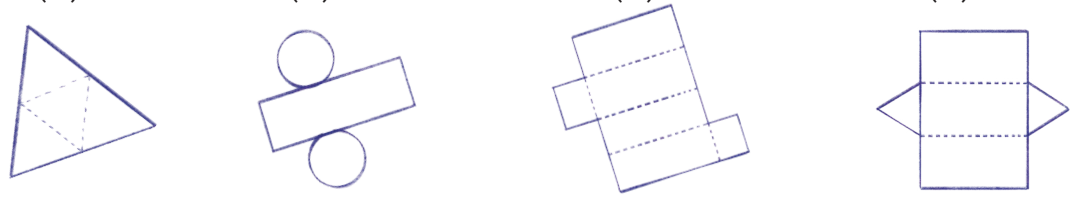
3. Match the following nets to the appropriate solids given below.

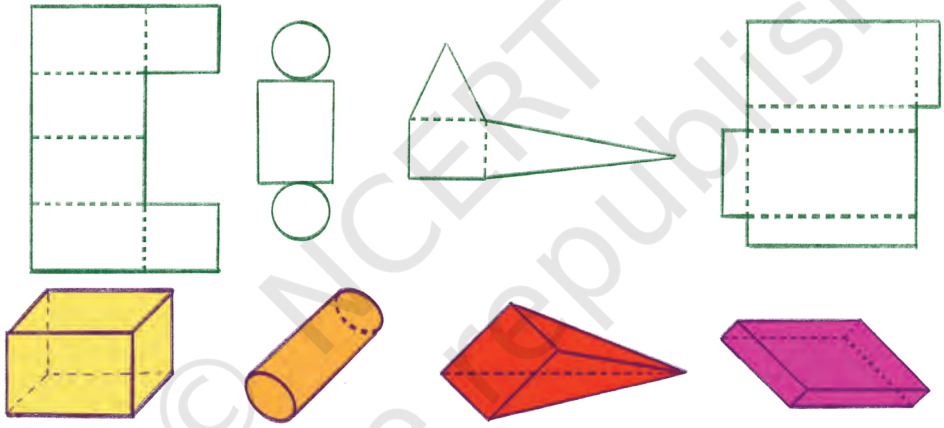
(1) (2) (3) (4)



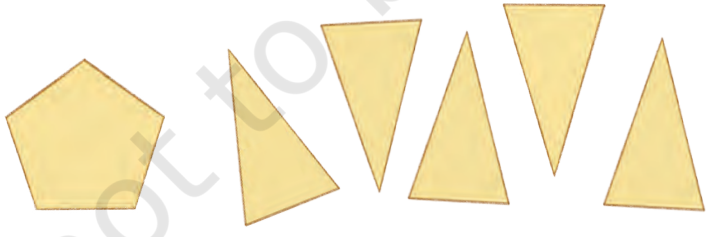
(a) (b) (c) (d)

4. Which of these nets can be folded to make a solid of the kind given below?

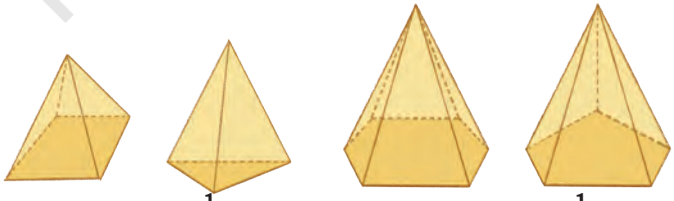
A. B. C. D.



5. Nitesh cuts up a net on the folds. Here are its pieces.



Which solid has the above pieces in its net?



a. b. c. d.

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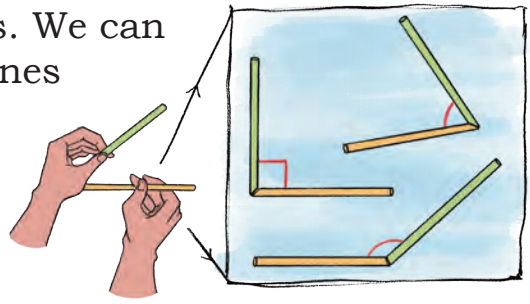
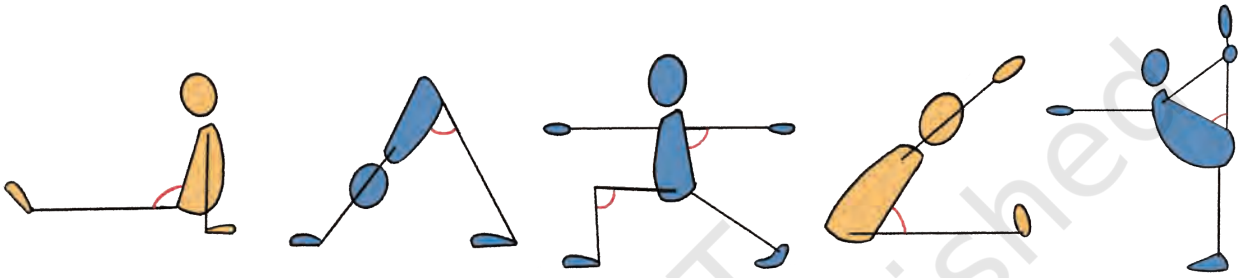
When Lines Meet

Isha made different corners with straws. We can say that the two straws are like two lines that meet at a point.

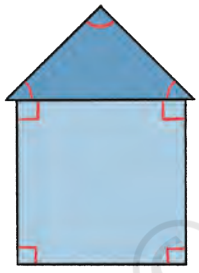


When two lines meet they create an angle.

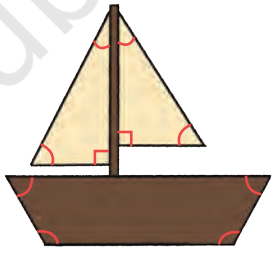
We see many angles in yoga postures.



There are 7 angles in this house drawing.



How many angles are there in this boat drawing?

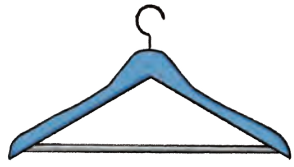


Let Us Do

1. Mark the angles in the following pictures.

a)

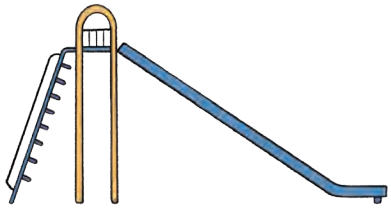
b)



c)

d)

e)



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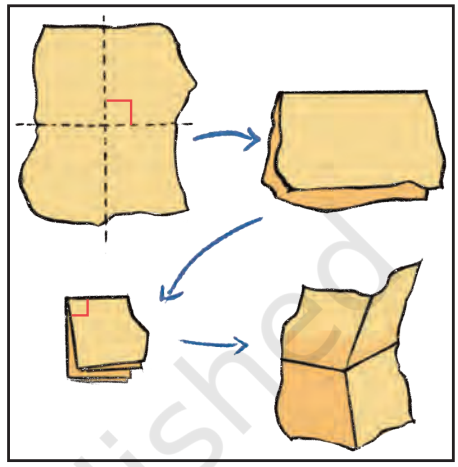
2. Where do you see angles in the classroom? Give a few examples.

_____

_____

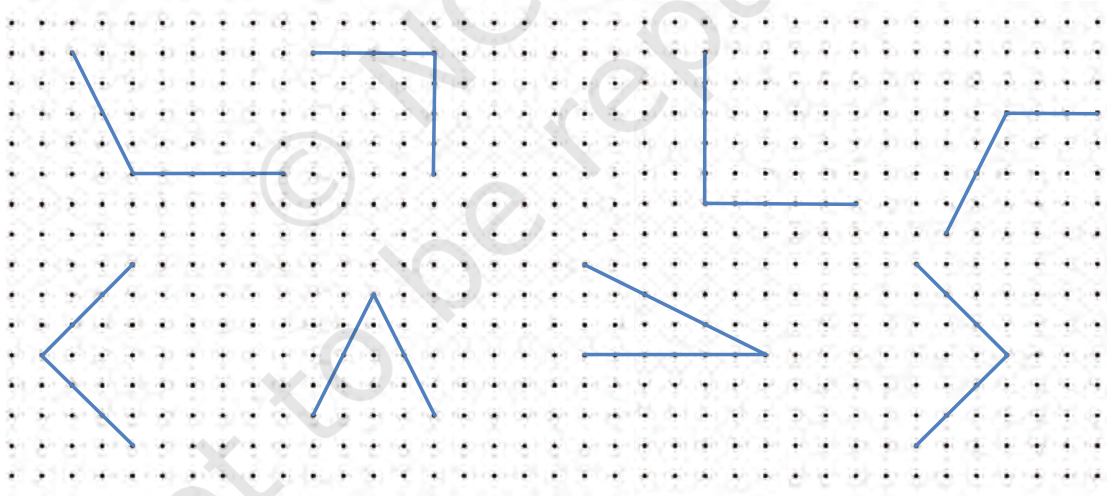
_____

Right Angles



Let's make a right angle with a piece of paper as shown.

Identify the angles that you think are right angles and circle them in the dot grid given below. Check using your right angle checker.



Check for right angles in a book, window, and any other object.

Write the names of objects where you find right angles.

_____

_____

_____

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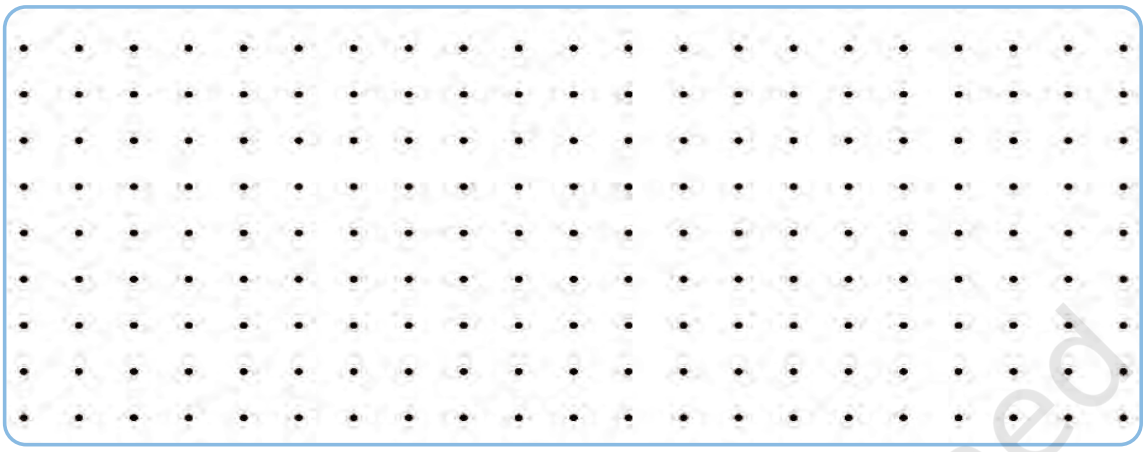
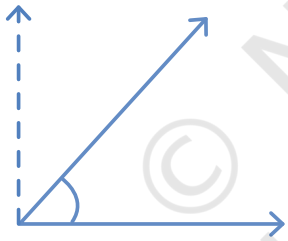
Let Us Do

1. Draw some right angles on the dot grid.

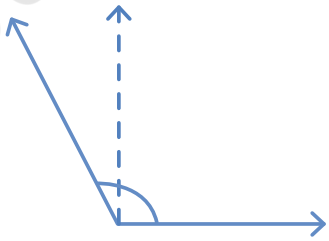


Acute and Obtuse Angles

Acute angles are less than a right angle.



Obtuse angles are more than a right angle.



Name some objects from your classroom which have an acute angle.

_____.

Name some objects from your classroom which have an obtuse angle.

_____.

Identify all angles in the following letters.

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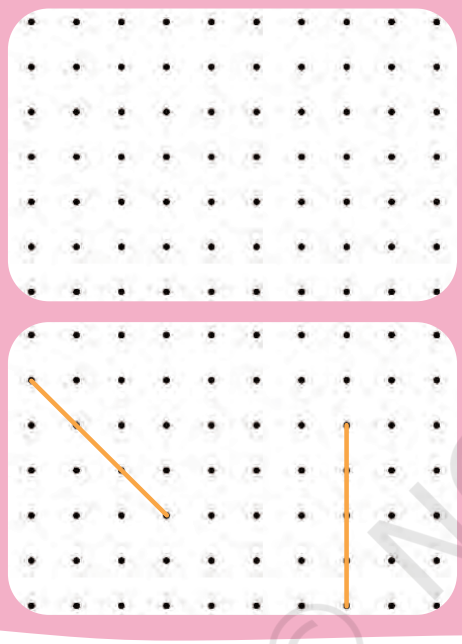
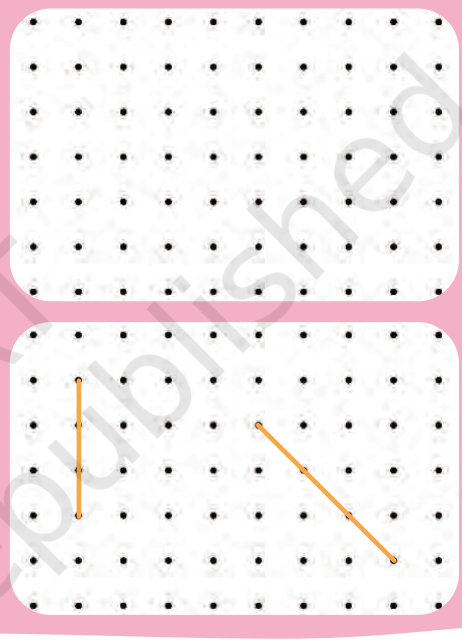
Let Us Do

1.

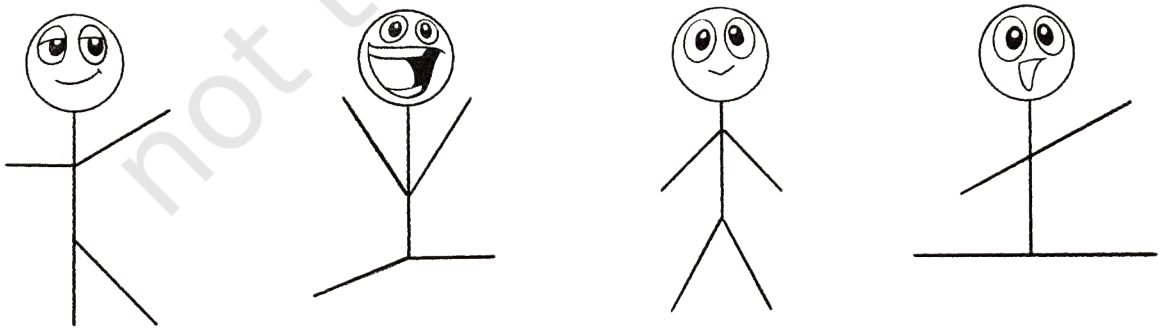
Draw some acute angles on the top grid. Draw a line to make an acute angle using each given line in the bottom grid.



Draw some obtuse angles on the top grid. Draw a line to make an obtuse angle using each given line in the bottom grid.



2. In the figures given below, mark the acute angles in red, right angles in green, and obtuse angles in blue.



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Shapes with Straws

Make a triangle with straws of different sizes and clay/ plasticine.

Does the shape of the triangle change if we gently push one of its sides?

Yes/No

Trace the triangles you made with the straws in your notebook.

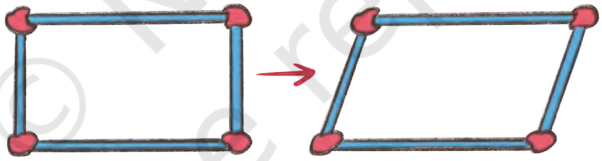
What kinds of angles does a triangle have?

Make a rectangular shape with straws and clay.

What kinds of angles do you see in the rectangle?.....

Does the shape of the rectangle change if we gently push one of its sides?

Yes/No



What has happened to the angles of the new shape?
Are they still right angles? What types of angles have been formed?
Similarly, push one side of a square.
Are they still right angles? What types of angles have been formed?
How are the angles of triangles and rectangles similar or different?

Note for Teachers: Help children to understand the rigidity of different shapes. The triangle is the most rigid shape, as it does not change its shape when pushed.

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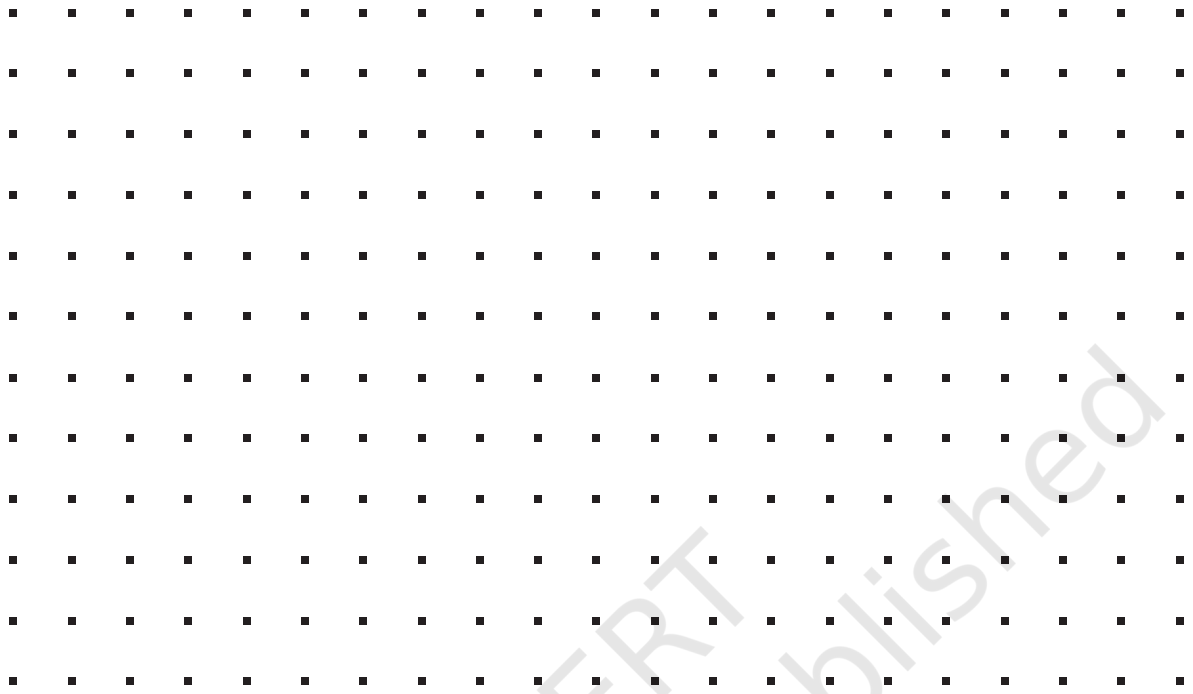
Use the dot grid given below to draw several three- and four-sided shapes. Circle the shapes that have one or more right angles.



Discuss: What shapes did you make?
How many shapes have you made with
a) 1 right angle
b) 2 right angles
c) 3 right angles
d) all right angles

Here are some 4-sided shapes.
In what ways are rectangle and square different from these shapes?

Note for Teachers: Discuss similarities and differences between a square and a rectangle. Provide experiences to observe squares as a special case of rectangles. Teachers can also provide more dot grids, if required.

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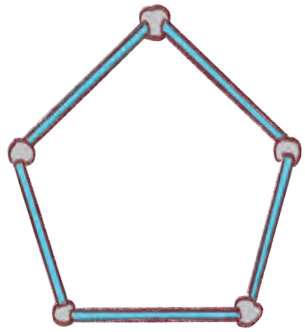
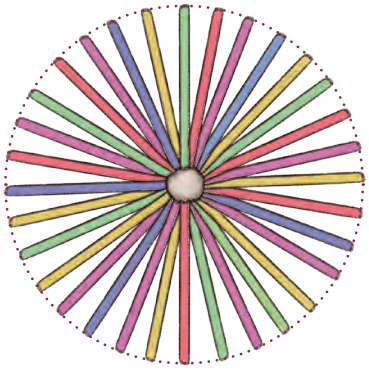
Try to make this 5-sided shape with all sides equal (Pentagon)



Are these right angles?

Does the shape of the pentagon change if we gently push one of its sides. Yes/No

How does this change the angles?



Can you make a circle using straws?

Look at the picture. The lengths of the straws in this picture are .....

(Equal/Unequal)

What will happen if we take straws of unequal lengths?

Let Us Make

Can you use a scale to draw a circular shape? Let us see.

Mark a point A.

Draw many points that are at an equal distance from point A.

Connect the dots freehand. What do you get?

.....

The point A is the centre and the line from the centre to the border of the circle is the radius.

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Amazing Circles

a) Take a piece of circular paper.

b) Fold your paper in half and crease it well.

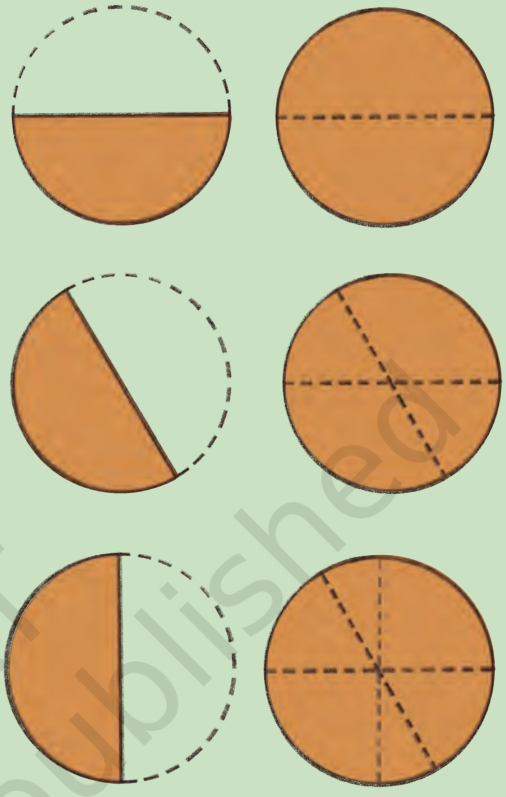
c) Open the fold and measure the length of the crease using a thread.

d) Fold your paper in half in a different way and crease it well.

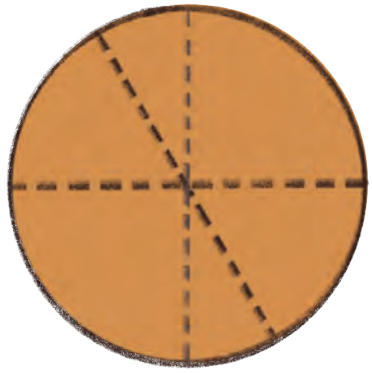
e) Open the fold and measure the length of the crease again.

f) Fold it again in half in a different way and crease it well.

g) Open the fold, measure the length of the crease.



1. The length of all the creases are _____. (Equal/Unequal)
2. These creases are called **diameters** of the circle.
3. Discuss where the centre is. Do you notice that all the diameters pass through the centre?
4. Measure the length of the creases from the center to the border of the circle. This is called the **radius** of the circle.
5. Discuss if there is any relationship between the radius and the diameter of a circle.



Note for Teachers: Children can measure the length using a paper strip or thread or scale.

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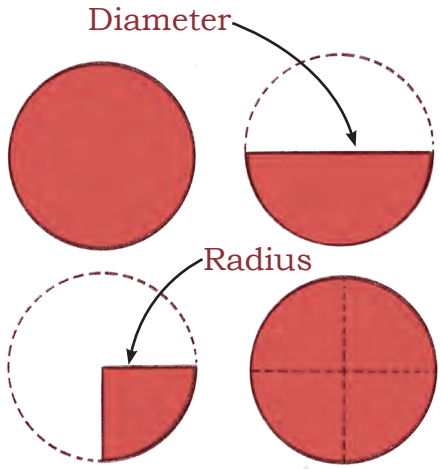
Let Us Do

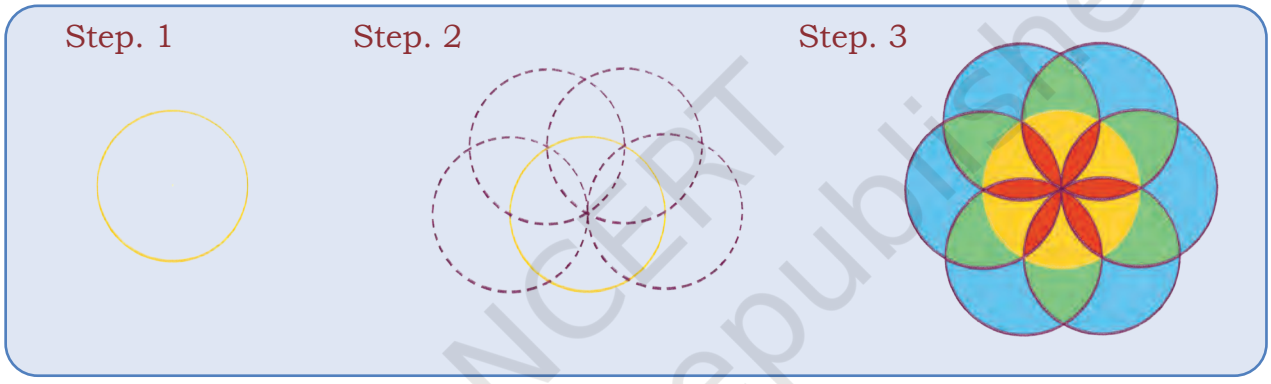


Fold the circular paper in half.

Fold this half again in half.

The length of the diameter is _____ (half/double) of the length of radius.

A circle can be made easily using a compass. Ask your teacher to help you use a compass. Make the following design.



Look at the carpet design. A beautiful circle, right?

Mark the centre, radius, and the diameter of the circular design with any colour of your choice.

Note for Teachers: Help children to draw circles using a compass. Encourage learners to draw different-sized circles.

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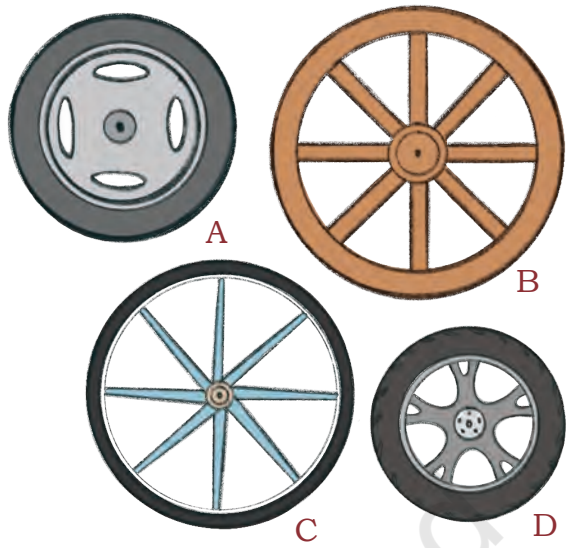
Look at the wheels.

All wheels look like .....

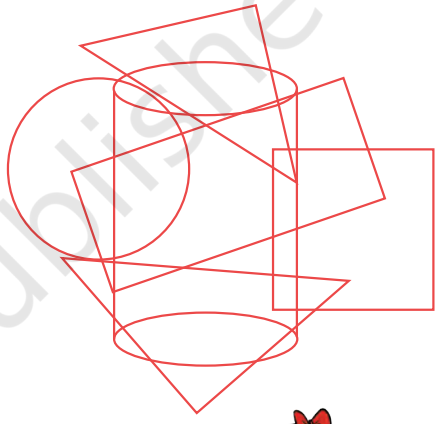


Name the wheel with the

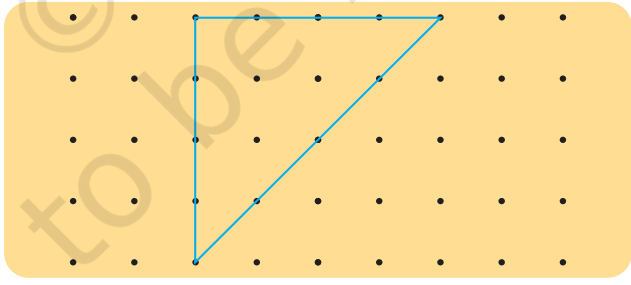
1. longest radius .....
2. shortest radius .....
3. longest diameter .....
4. shortest diameter .....

Puzzling Shapes

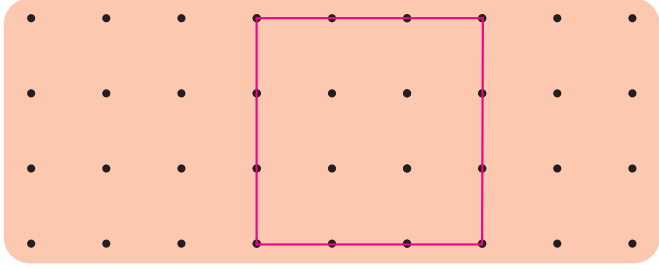
1. Identify the hidden shapes and write their names.



2. Draw 2 lines to divide the triangle into 1 square and 2 triangles.



3. Draw 2 lines to divide the square into 3 triangles.



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4. Draw lines to show the cuts needed on the shapes in the left column to get the smaller shapes on the right.

(A)		
(B)		
(C)		

Card Game

Sort the 2D-shape cards given at the end of the book into three groups according to their sides.

Draw the sorted shapes in the space given below. Explain why you sorted your shapes in this way.

Group 1	
Group 2	
Group 3	

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Let Us Try

1. Squiggly spiders

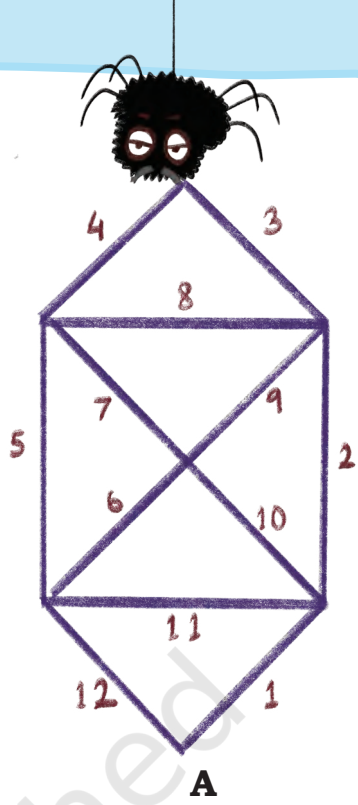
Squiggly, the spider, likes to make webs in different shapes. One day she begins to make triangular webs.

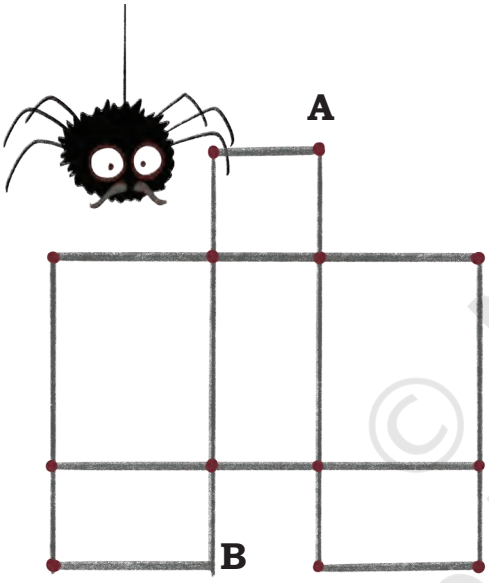
How many triangles are in her web?

She likes to take a walk each morning and check if the walls of her web are strong.

Can she begin at point A and reach back to the same point without walking on any wall more than once?

Trace and show Squiggly's path.





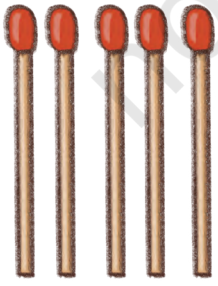
Her brother, Wiggly made a web using rectangles. How many rectangles can you see in his web?

He likes to take a walk at the end of each day and check if the walls of his web are strong.

Can he begin at point A and leave from point B without walking on any wall more than once?

Trace and show Wiggly's path.

2. Use 5 matchsticks to make 2 triangles. Then draw it in the space provided.



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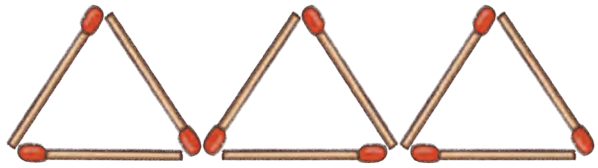
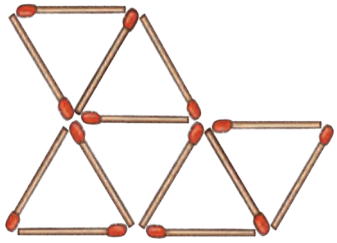
3. Move two of these matchsticks to form 4 triangles.



4. Remove 4 of these matchsticks to leave only 3 triangles.



5. Model challenge.

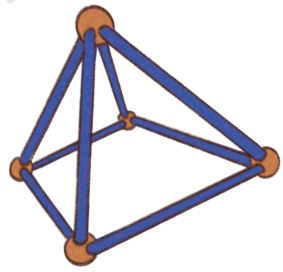
Can you make a model of solid shapes which has

a) 12 straws and 8 clay balls?

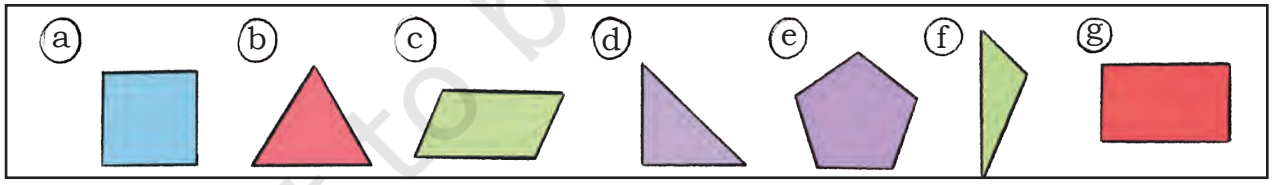
b) 9 straws and 6 clay balls?

c) 15 straws and 10 clay balls?

d) 10 straws and 6 clay balls?



6. Classify these shapes based on the number of angles.



3 angles		4 angles		5 angles	

What relation do you notice between the number of sides and the number of angles?

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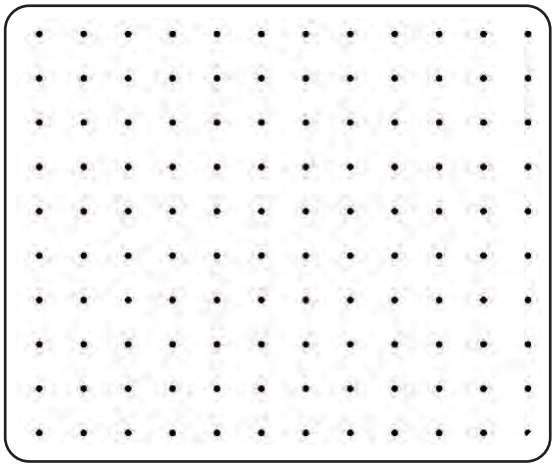
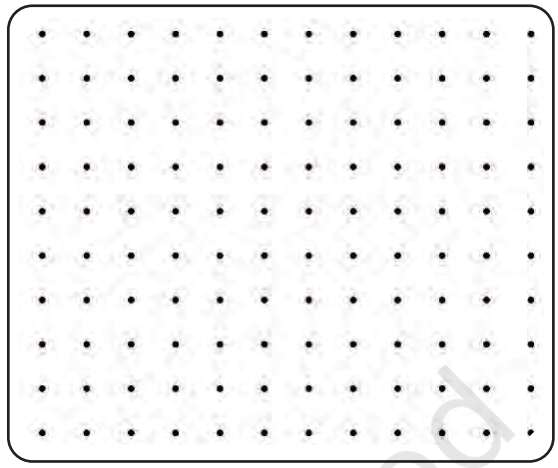
7. Draw a 2D shape that has less than 5 angles.

Draw a 2D shape with more than 5 angles.



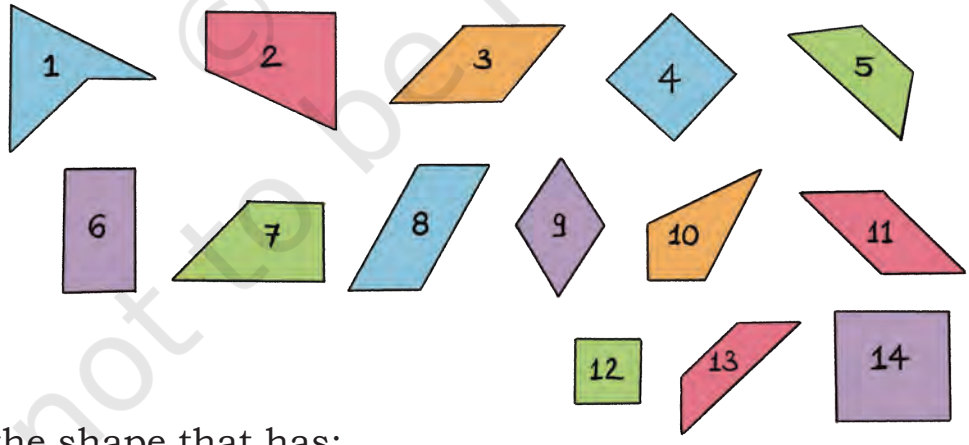


8. Mark the right angles and write the number of right angles in each figure.

_____ _____ _____ _____ _____ _____

Which of the above shapes have only right angles?

9. Observe the following shapes.



Identify the shape that has:

- 2 right angles, 1 acute, and 1 obtuse angle _____.
- 1 right, 2 obtuse, and 1 acute angle _____.
- 2 obtuse, and 2 acute angles _____.
- 4 right angles _____.

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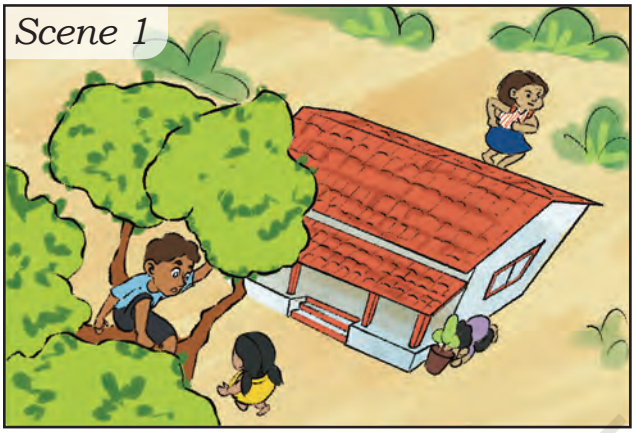
Chapter

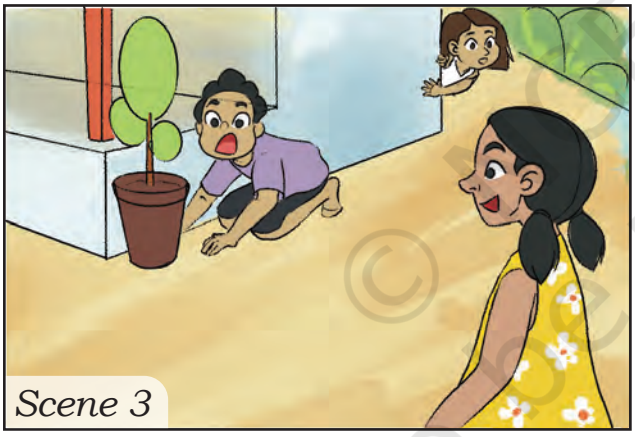
2

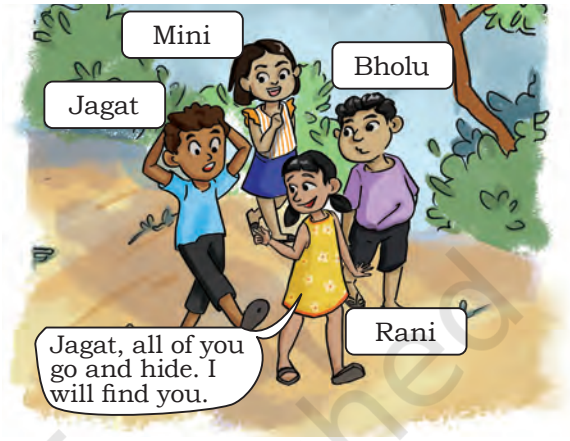
Hide and Seek

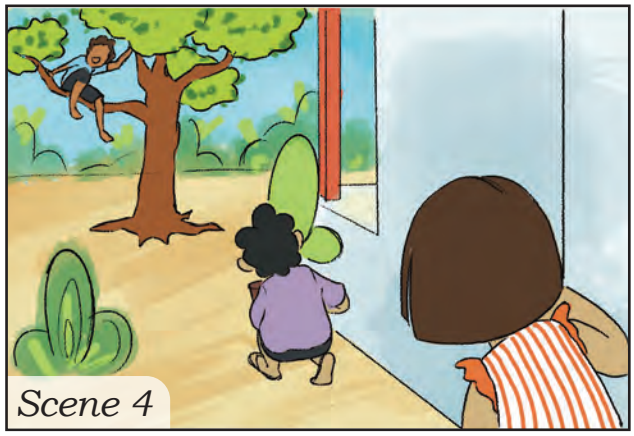
0433CH02

WHERE ARE YOU HIDING?









Let Us Do

1. Look at the picture and answer the following:

   a) Which game are the children playing? _____

   b) Who is looking from the top?_____

   c) In Scene 1, if Rani faces towards the hut, will she be able to see who all are hiding near the hut? _____

Discuss.

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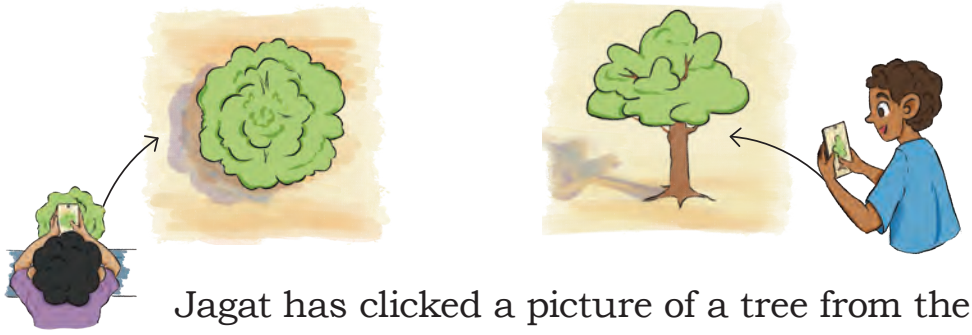
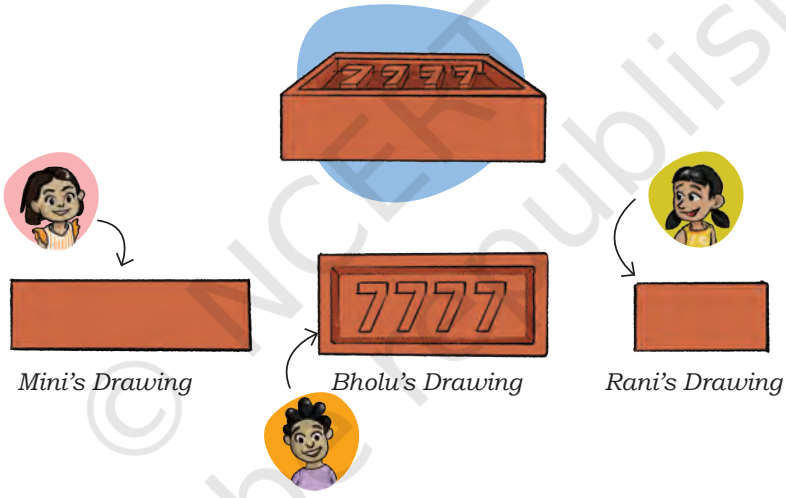
In Scene 4, can Mini see all the children playing the game? Discuss.

Bholu is amazed to see how this tree looks from the top.



Jagat has clicked a picture of a tree from the front.

2. Mini, Bholu, and Rani draw the same brick. Why are their drawings of the same brick different? Discuss.



Whose drawing shows the following views?

View of the Brick drawing	Name of the child
The top view	
The front view	
The side view	

Note for Teachers: Children may come up with different answers. Also, discuss with them the kinds of views present in the pictures, for example, top view, side view, and front view.

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3. Look at the pictures and name the objects. Also write which view of the object is given.

Name _____
View _____

Name _____
View _____

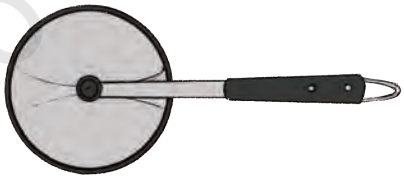
Name _____
View _____

Name _____
View _____

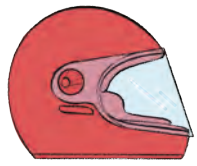
Name _____
View _____

Name _____
View _____

Name _____
View _____



Name _____
View _____



Name _____
View _____

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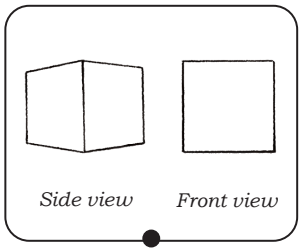
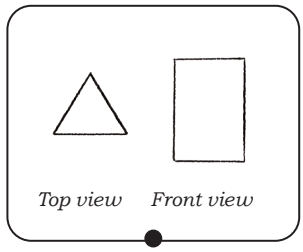
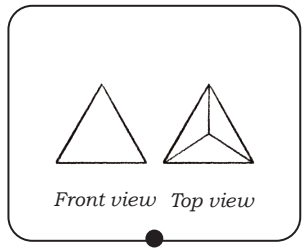
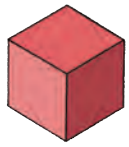
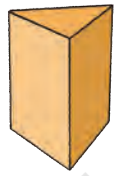
4. Jagat and Rani have made different drawings of the same objects. Match the views with the objects.







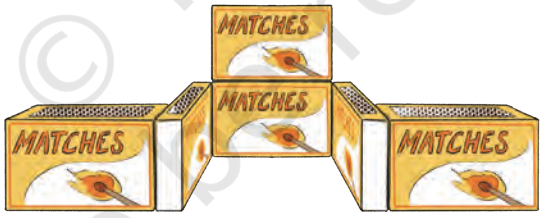




Look around you! Try to make drawings of objects, such as chairs, tables, pencils, erasers, birthday cap, and bottle from different views.

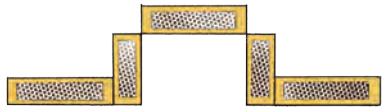
Boxy Buldings

Jagat and Mini are playing. They are making different buildings using empty matchboxes and making their drawings from different views.



Front view

Back view



Top view

Now, you also collect empty matchboxes or any other empty boxes to create different buildings and draw their top, side, and front views. You can challenge your friends by asking them to match your drawing with the right building.

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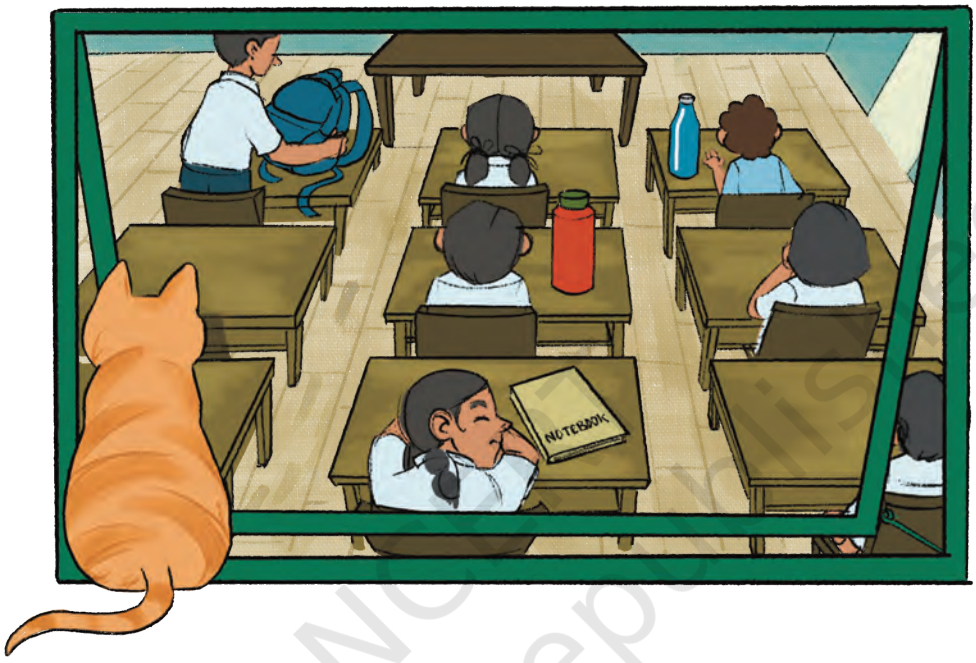
Cat Finds Jagat

The next day, the five friends go to school feeling excited as it is an activity day. Jagat's pet cat follows him to school. The cat sits on the window and tries to find Jagat.



Let Us Do

Jagat's cat sees him sitting on the third desk in the first row.

1. Mark Jagat's position in the picture.
2. Describe the position of the blue bag _____.
3. What do you see on the middle desk of the second row? _____.
4. Where is the notebook kept — the first desk in the second row or the middle desk in the third row?
5. Draw an apple on the third desk of the second row.

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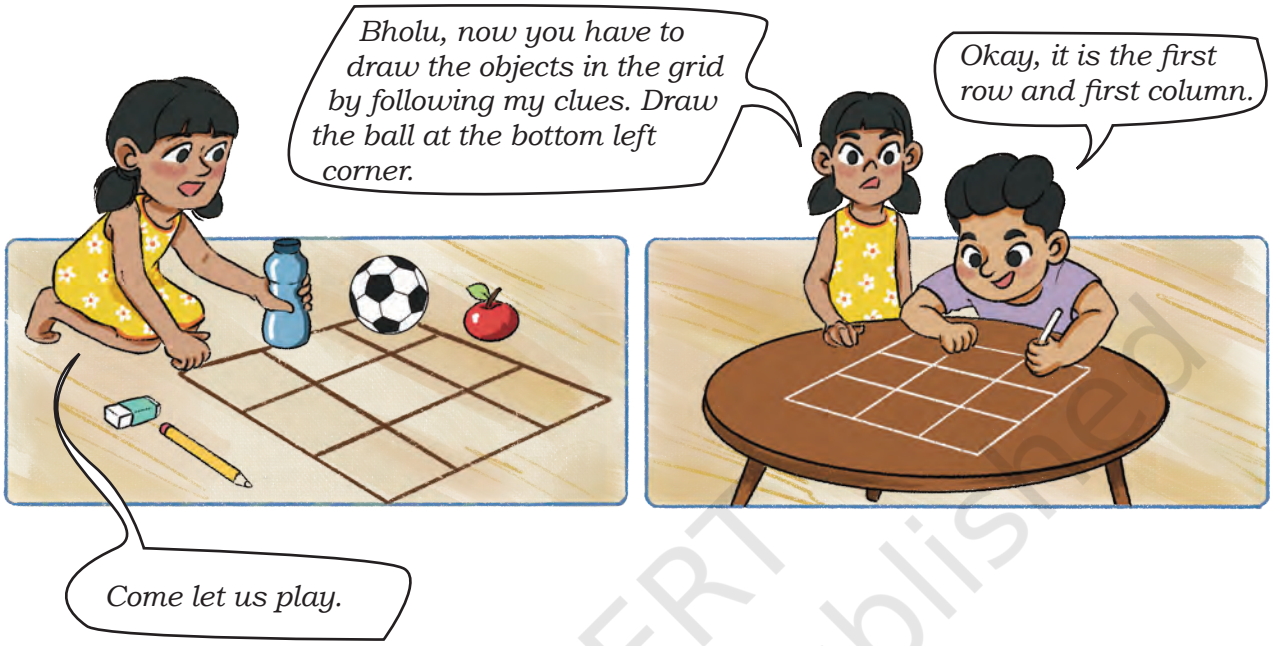
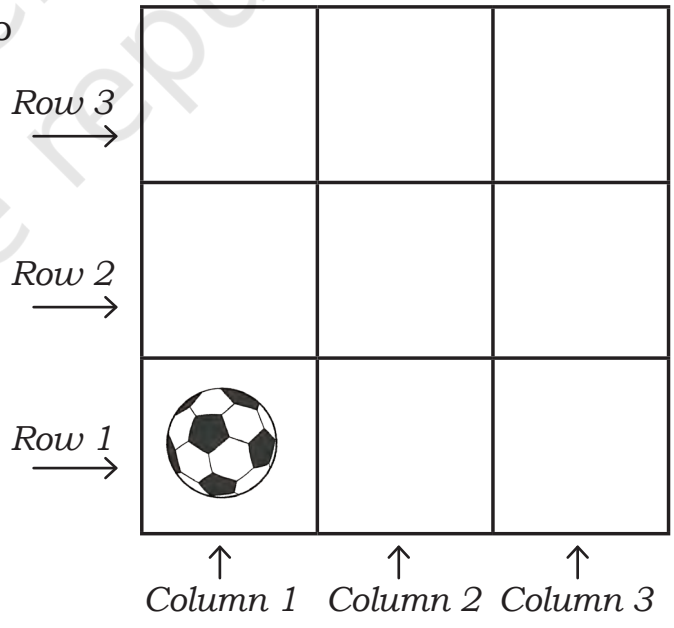
Grid Game



Here are the clues given by Rani to fill the grid:

- An eraser at the top right corner.
- A pencil in the top left corner.
- An apple in the middle of the second row and second column.
- A water bottle in the third row and second column.

BHOLU'S GRID



Note for Teachers: Let the children play the grid game in the class. They can draw the grid on the table or on the floor. They can place different objects at different positions of the grid.

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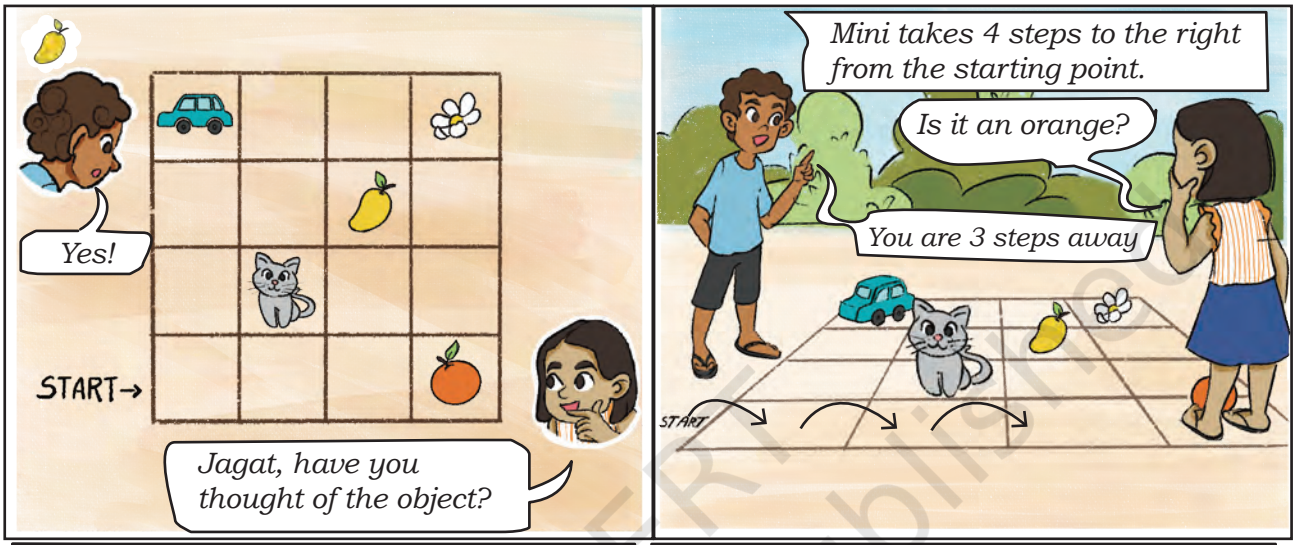
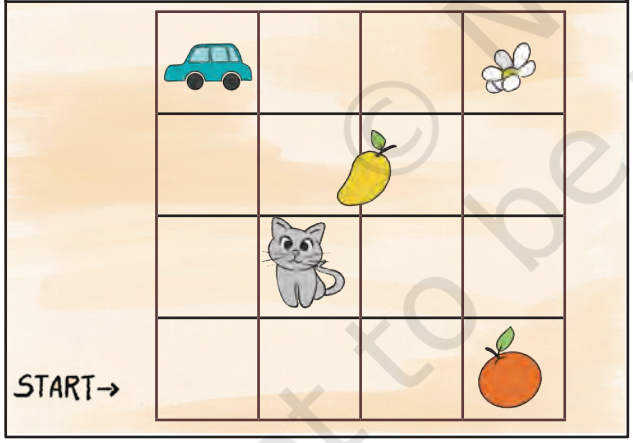
Grid Game — Treasure Hunt

In this game, one player has to think of an object from the grid and help the other player locate it.

Let's see how Jagat and Mini are playing.



Mini takes 2 steps to the left and 1 step upwards. She reaches the _____ Mark Mini's position on the grid.



What object did Jagat think of?

Note for Teachers: How to play—There are objects placed in a 4×4 grid. The first player helps the second player to reach the object he/she has thought of by giving clues. The players can move up, down, left or right. No diagonal movements are allowed. Children can play this game in pairs. Let student write/speak about the paths: provide them with prompts/questions/fillers, such as from the starting point, I moved ___steps left/right. Then I moved ___steps up/down and so on.

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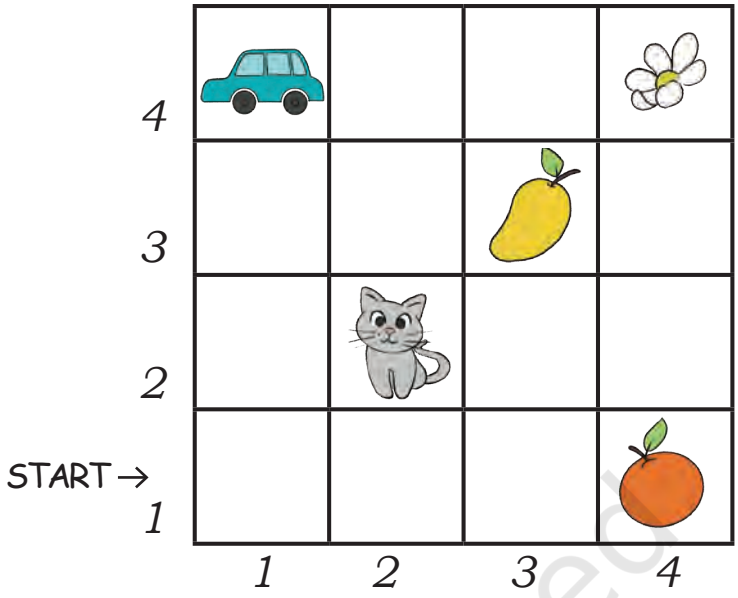
Play the game with your partner.

From the starting point, trace the paths to reach the flower. How many steps are required for each path?

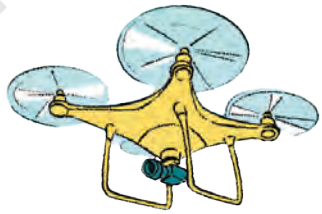
Speak out or write down the different paths followed to reach the flower.

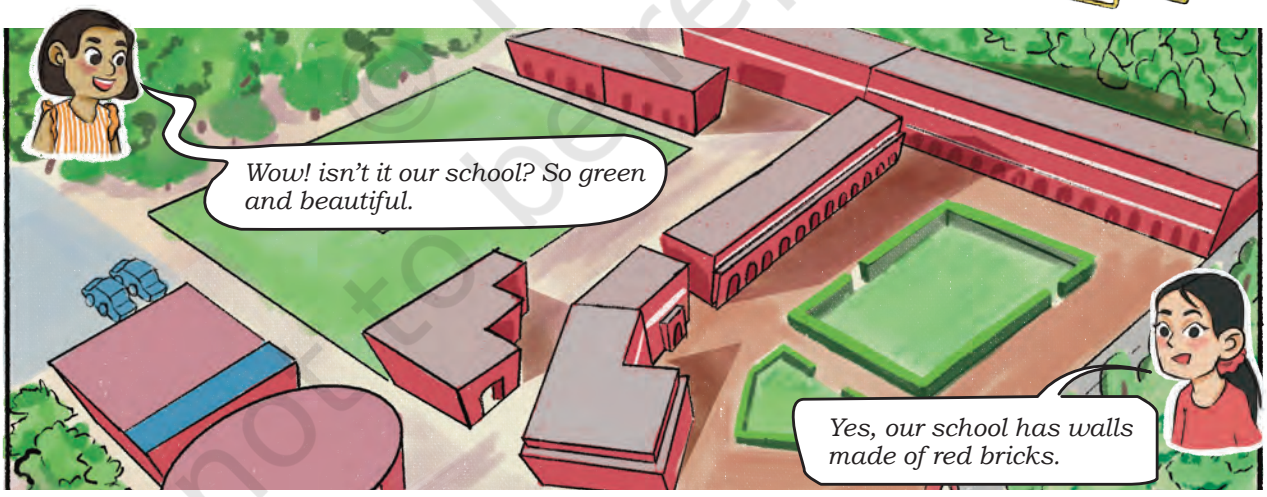
From the starting point, where would you reach in a smaller number of steps: the mango or the orange?



Drone Around the School

Gyan has got a drone to show her friends. A drone can take pictures while flying.





Circle the places or things that you see in the picture and write their names.

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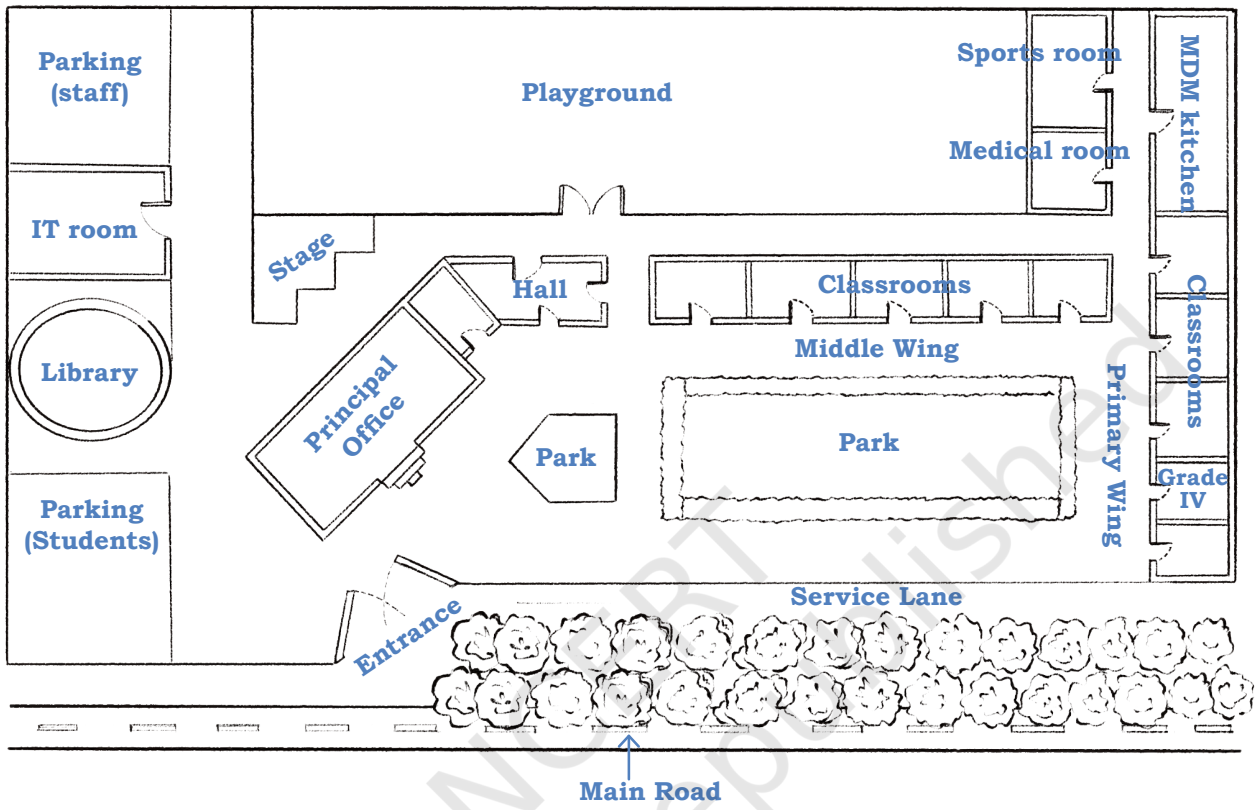
Preet's elder sister has made a sight map of the school. You can easily locate Grade 4 on the map.

Trace the path from the Grade 4 classroom to the stage.



How many routes were you able to find? _____(You may use different colour pencils to trace the different routes)

Which is the shortest route? How do you know?

The water delivery man has turned left from the entrance. Help him reach MDM Kitchen by telling him the route. Write the directions below.

_____

Rajat is not feeling well. Which way will you choose to take him to the medical room from the library?

After the assembly in the playground, Bholu must go to the IT room and Rani has to go to the sports room.

Trace their paths. Which way is longer?

_____

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Let Us Do (Project Work)

Draw a sight map to show the way from your school entrance to your classroom and any other important places.

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Chapter 3

Patterns Around Us

0433CH03

Let Us Count

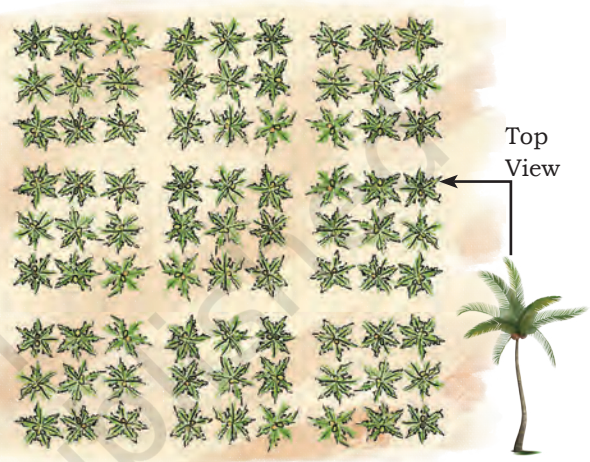
Gundappa has some land with tall coconut trees.

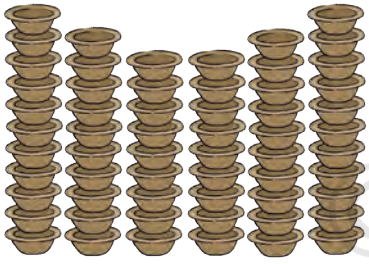
How many coconut trees does Gundappa have? _____

How do you know?

Gundappa has plucked 5 coconuts from each tree.

How many coconuts has he plucked?_____

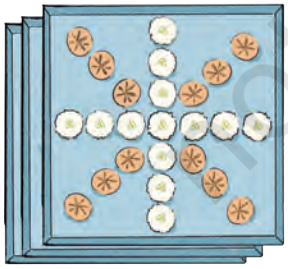




Muniamma makes plates and cups.

Number of cups = _____

Muniamma has arranged *coconut laddoos* and *milk peda* in trays like this. All trays have the same arrangement. Trays are placed one on top of the other.



How many coconut laddoos are there in the trays? _____

How many milk pedas are there in the trays? _____

Note for Teachers: Encourage learners to count using different ways of grouping and share their thinking.

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Patterns with Money

Shirley and Shiv arranged their play money in some nice patterns as shown below.

How much money? _____

How much money? _____

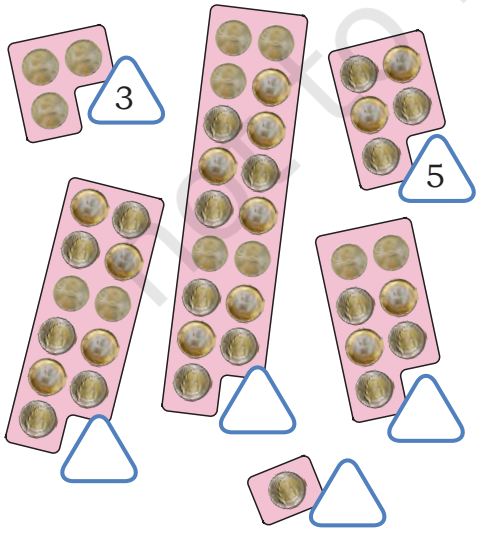
How did you count them? Discuss in class.

Arrange play money of amounts 1, 2, 5, and 10 to show ₹36, ₹125, and ₹183. Ask your peers to tell how much it is.

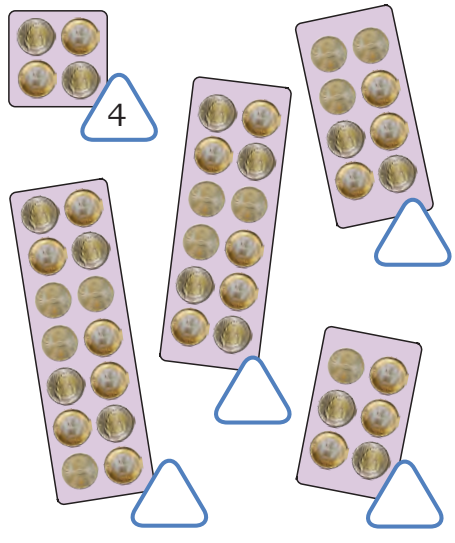
TWO WAYS

Shirley and Shiv arranged their coins in the following ways. Write the number of coins in the triangles.

Shirley



Shiv



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Describe Shiv's arrangement and write his numbers.

_____

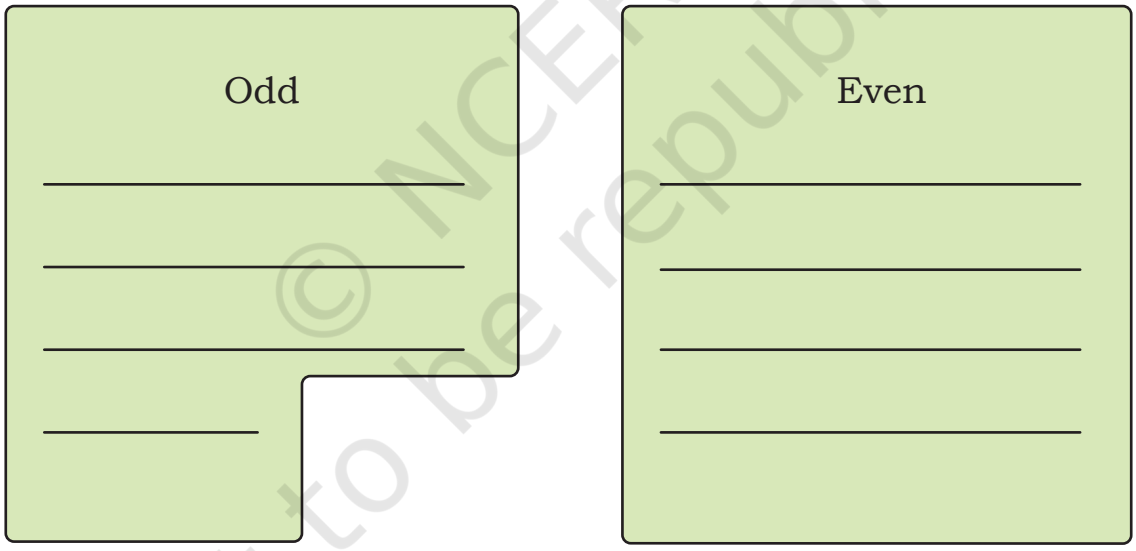
Describe Shirley's arrangement and write her numbers.

_____

Shiv has arranged his numbers in pairs. We call such numbers 'even numbers'.

Shirley's numbers are called 'odd numbers'.

Identify numbers between 1 and 20 as even or odd. You may draw the pairing arrangement of the numbers.



Do you think all numbers in the times-2 table are even?

Note for Teachers: Encourage students to identify the pattern-number of objects that can be paired (even) and those that cannot be paired (odd).

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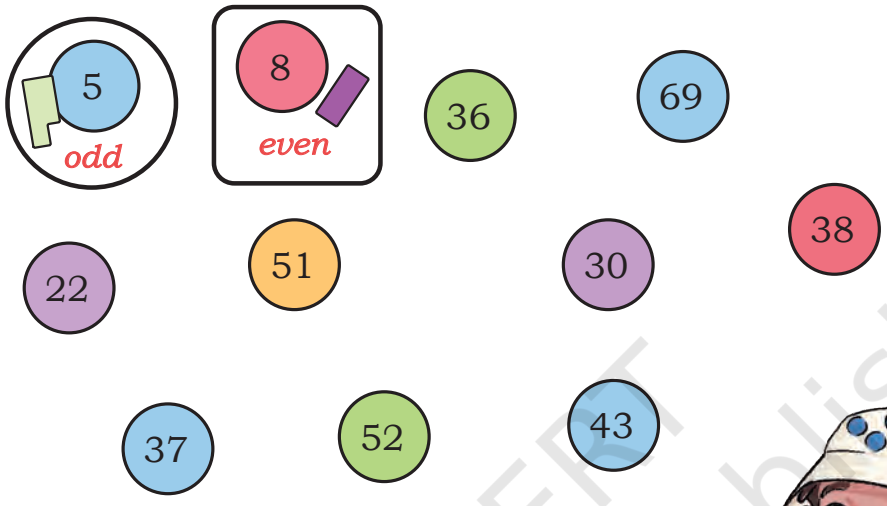
Crayons Arrangement

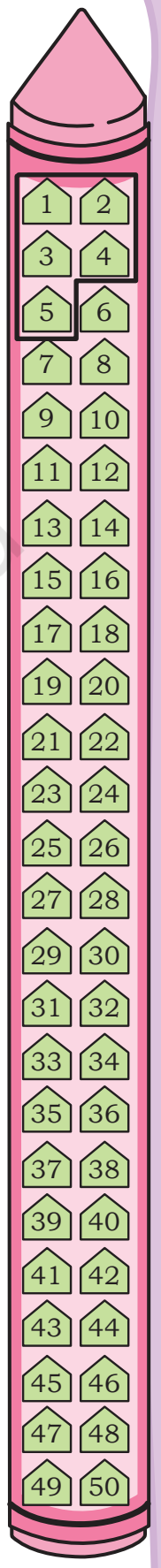
Circle the odd numbers and put a square around each even number. Use the crayons arrangement, if needed.



Which numbers are even and which are odd? Discuss.

Shirley observes an interesting even-odd pattern in the page numbers of her Maths book.

Explore your textbook and find out what Shirley has seen. Draw a square on the even numbers. Put a circle on the odd numbers.



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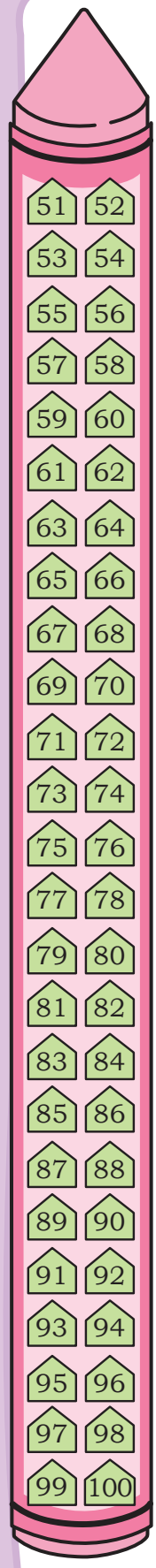

Identify which of the following numbers are even and which are odd. Explain your reasoning.

30 46 78 67 300 154 415 99

Odd numbers : _____

Even numbers : _____

Make two 2-digit numbers using the digits 1 and 6 without repetition.

_____

Identify the numbers as even or odd. Now choose any two digits and make 2-digit numbers in such a way that the numbers are even. _____

Are there more even or odd numbers between 1 and 100?

Shirley notices that both the numbers, before and after an odd number, are even.

Shiv wonders if both the numbers, before and after an even number, will be odd. What do you think? Check and discuss.

Choose any 10 numbers in order without skipping any (consecutive numbers). Write whether they are even or odd below each number. What do you notice? Discuss.

20 21 ○ ○ ○ ○ ○ ○ ○ ○

_____ _____ _____ _____ _____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____ _____ _____ _____ _____

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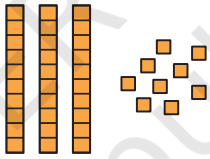
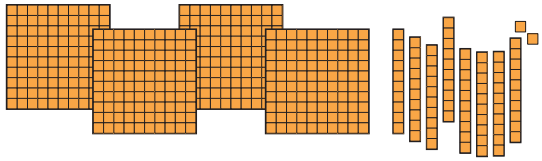
Chapter 4

Thousands Around Us

0433CH04

Jaspreet and Gulnaz are organising a *langar* (a community lunch) in their neighbourhood Gurudwara. They expect around one thousand (1000) people to be fed on that day. Fifty-five people volunteer to serve during this event. Jaspreet and Gulnaz receive many donations.

The donations are shown in the table below. Write the number in each case.

Donations	Quantity	Number
		
	4 Ones + 7 Tens	
	100 – 7	
		

Note for Teachers: Support children in revising the different representations for 2- and 3-digit numbers through such tasks.

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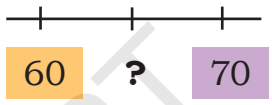
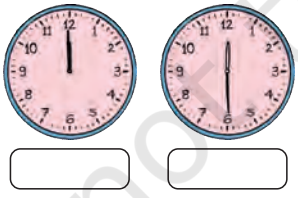
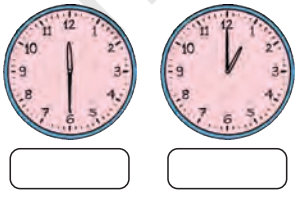
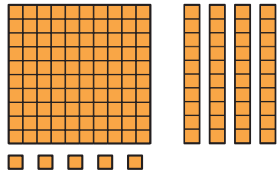
Donations	Quantity	Number
	Twelve	
	10+10+10+10+10	
		
	Ten more than three hundred twelve	

Jaspreet and Gulnaz record the number of people who come for the community lunch at different times.

Write the time and draw the number of people who had food at different time slots using HTO blocks as shown below.

	52 people	
	145 people	

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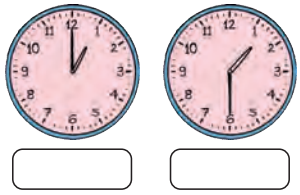
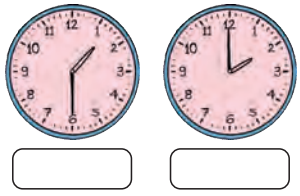
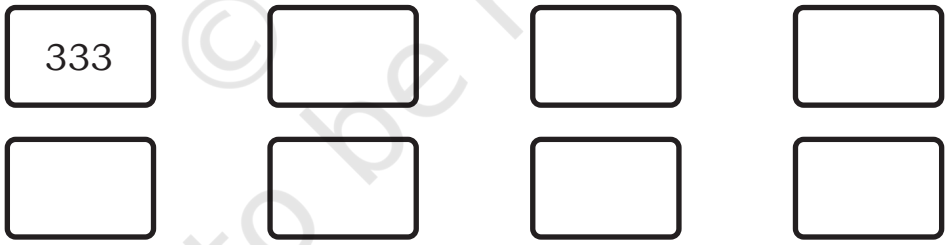
	325 people	
	508 people	

The time slot when the most number of people came for lunch is _____.

The time slot when the least number of people came for lunch is _____.

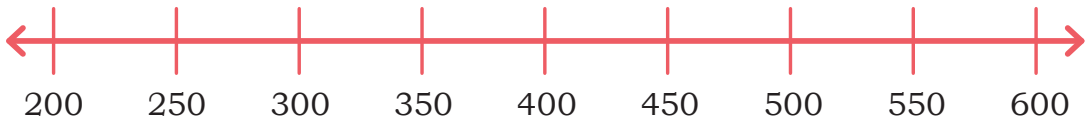
Let Us Do

1. (a) Make 3-digit numbers using the digits 3 and 7. Write the numbers in the boxes given below. Circle the smallest and cross out the largest.



(b) Make six 3-digit numbers using the digits 3, 5, 0, 8 such that all numbers are less than 550. You can repeat the digits.

(c) Mark the numbers you made in 1(b) on the number line.



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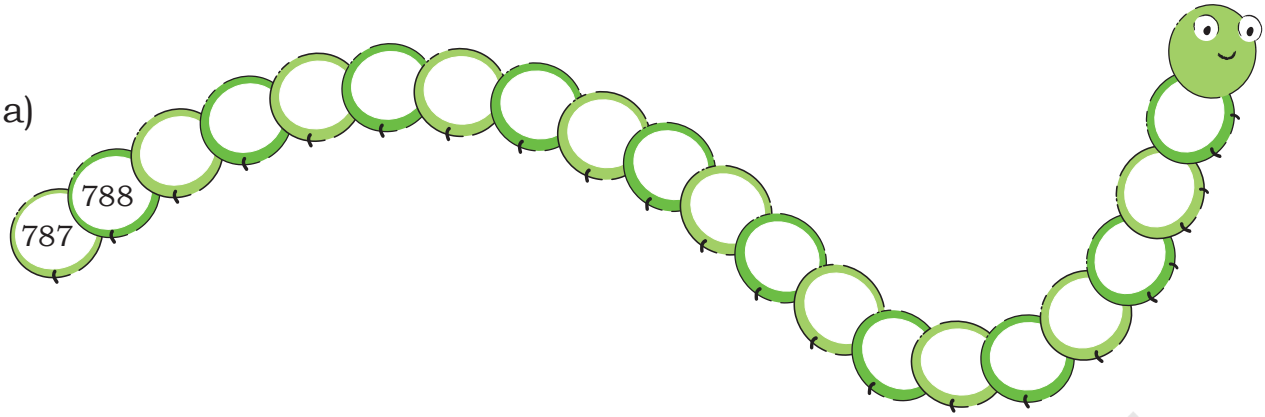
2. Fill in the blanks with appropriate numbers.

a)



b)

c)

d)

e)

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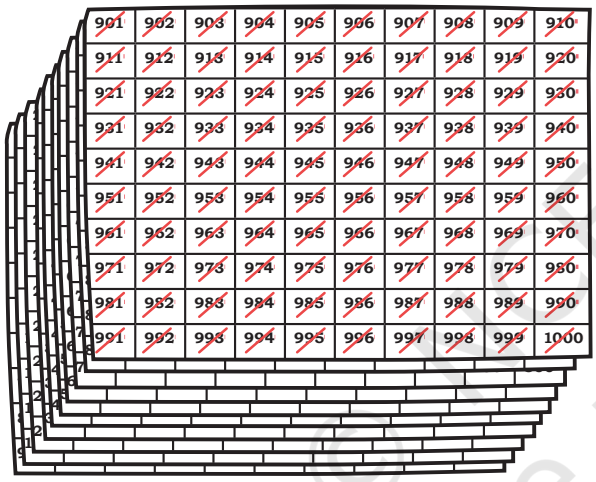
As we have learnt in Grade 3, the Indian system of writing numbers, which we have been learning and practising in school to write and add and subtract numbers, was discovered in India around 2000 years ago, and is now used around the world. This system was designed so that we can write all numbers, no matter how large they are, using just the ten symbols 0, 1, 2, 3, 4, 5, 6, 7, 8, and 9.

Till now, we have learnt how to write all numbers from 1 to 999. Now let us explore how to write numbers one thousand and larger in the Indian number system!

You remember that Gulnaz and Jaspreet had kept track of the people who came for the community lunch.

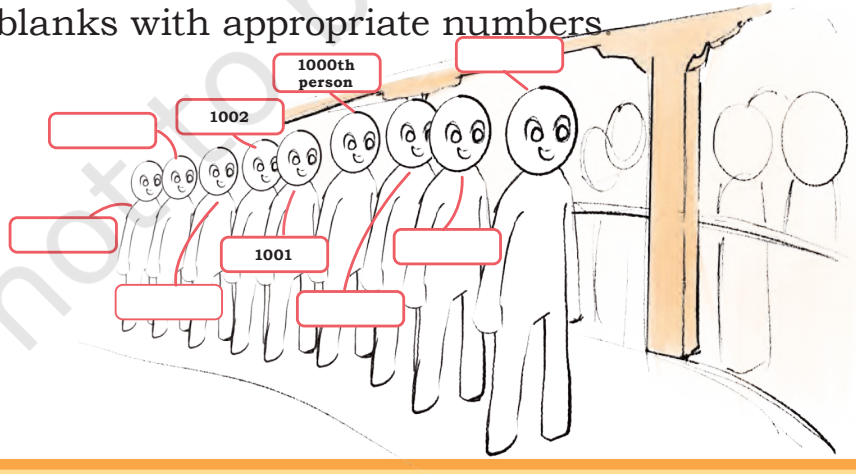
Let us see how they did it.



1001	1002	1003	1004	1005	1006	1007	1008	1009	1010
1011	1012	1013	1014	1015	1016	1017	1018	1019	1020
1021	1022	1023	1024	1025	1026	1027	1028	1029	1030
1031	1032	1033	1034	1035	1036	1037	1038	1039	1040
1041	1042	1043	1044	1045	1046	1047	1048	1049	1050
1051	1052	1053	1054	1055	1056	1057	1058	1059	1060
1061	1062	1063	1064	1065	1066	1067	1068	1069	1070
1071	1072	1073	1074	1075	1076	1077	1078	1079	1080
1081	1082	1083	1084	1085	1086	1087	1088	1089	1090
1091	1092	1093	1094	1095	1096	1097	1098	1099	1100

How many people came for the community lunch? _____

Fill in the blanks with appropriate numbers.



Note for Teachers: Let children notice how numbers beyond 1000 are written. Lead them to read these numbers and write the numbers.

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3. Identify the range of numbers most suitable for the following situations. Share your thoughts.

Number of children in your village	**Only 1**
Number of teachers in your school	**2 to 5**
Number of tables in your classroom	**10 to 50**
Number of books in your library	**50 to 100**
Number of leaves in a plant	**100 to 200**
Number of pages in your math textbook	**200 to 500**
Number of ants in an anthill	**500 to 1000**
	More than 1000

Number of books in your classroom
Number of fingers in your classroom
Number of leaves in a tree
Number of letters on this page
Number of children in your school
Number of girls in your school
Number of steps to reach school

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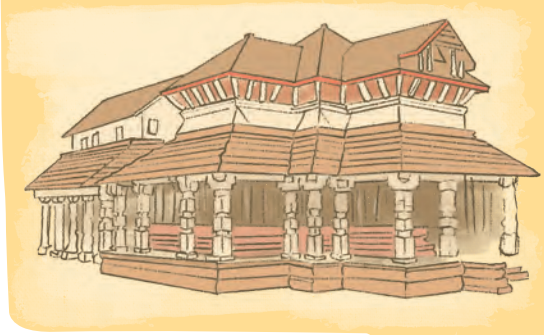
Identify things around you that are more than 1000 in number.

1000s AROUND US



The Thousand Pillars Temple, or Saavira Kambada Basadi, is the most famous among the 18 Jain temples in Moodubidiri town, Karnataka. Built in the 1500s by the local ruler Devaraya Wadiyar, each of its thousand pillars is decorated with unique rock carvings.

Did you know?

In the early 1900s, the population of the Indian rhinoceros was driven to near extinction, with only around 200 rhinoceros left. With recent conservation efforts, there are around 4000 (four thousand) rhinoceroses.
It weighs between 1800 kg (one thousand eight hundred and 2700 kg (two thousand seven hundred), is around 2 m high/tall and more than 3 m long. The Indian rhinoceros is the state animal of Assam.

My country

India is a country with a rich cultural heritage. It has 788 districts. These districts are divided into about six lakh villages, each with its own unique traditions and practices. India has over 7500 kilometres (Seven thousand five hundred) of coastline on three sides. Our country's history goes back over 5000 years (Five thousand), and we celebrate more than 1000 festivals.

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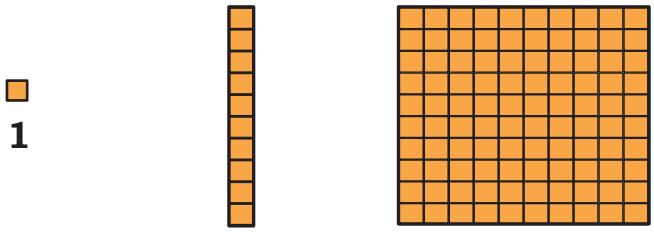
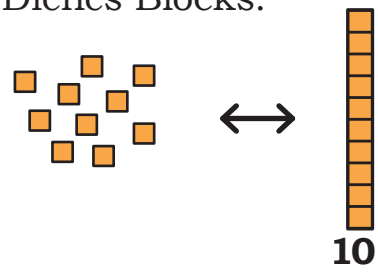
One Thousand (1000)

You have seen how to visualise one (1), ten (10) and one hundred (100) using Dienes Blocks.



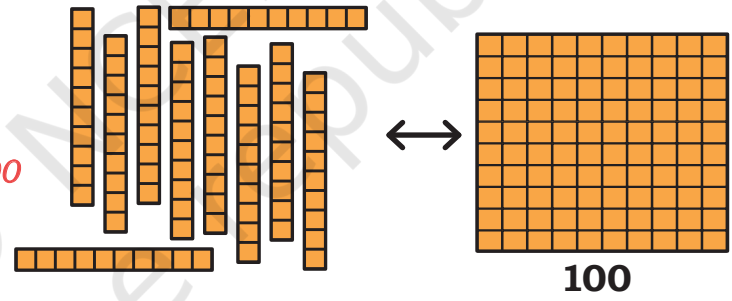
Let us now learn about one thousand (1000) using Dienes Blocks.

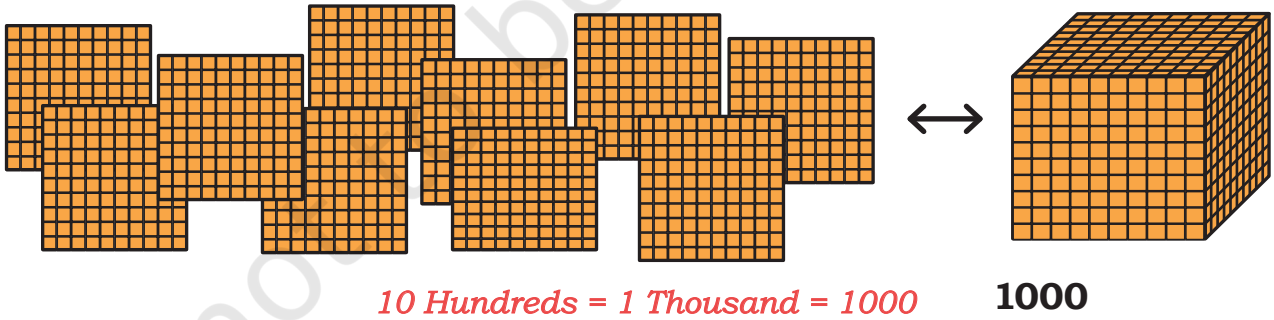
Counting is easy when we group in Tens



10 Ones = 1 Ten = 10

10 Tens = 1 Hundred = 100





10 Hundreds = 1 Thousand = 1000

Note for Teachers: Give learners the experience of grouping and regrouping in 1s, 10s, and 100s. The following pages have some examples of tasks to engage learners.

Zoltán Pál Dienes was a Hungarian mathematician and educator who developed Dienes blocks. These blocks represent different numerical values, and help students understand the idea of the Indian base-10 place value system of writing numbers and carrying out arithmetic operations on them.

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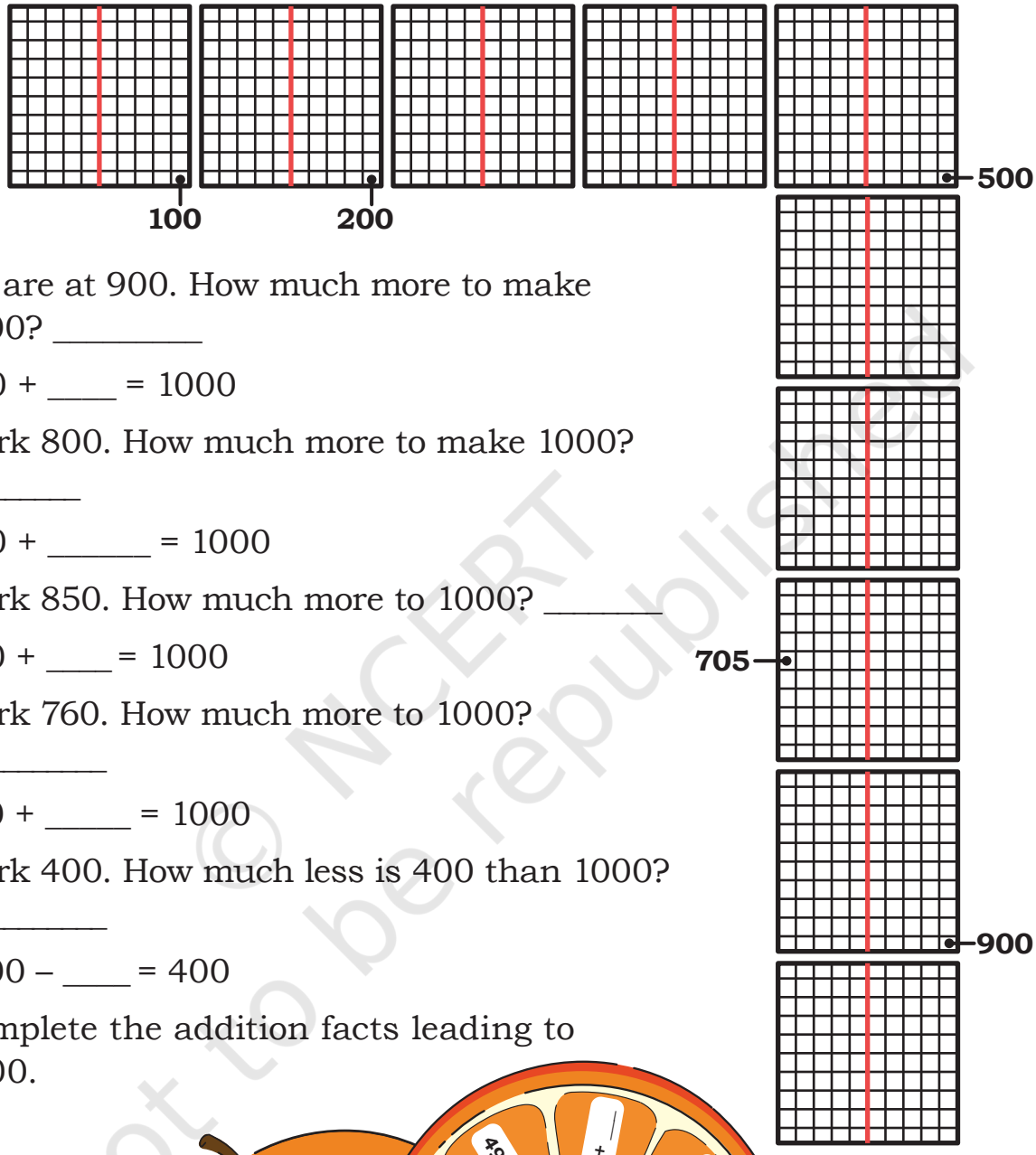
Let Us Break Up One-Thousand



a) We are at 900. How much more to make 1000? _____

900 + ____ = 1000

b) Mark 800. How much more to make 1000?

_____

800 + _____ = 1000

c) Mark 850. How much more to 1000? _____

850 + ____ = 1000

d) Mark 760. How much more to 1000?

_____

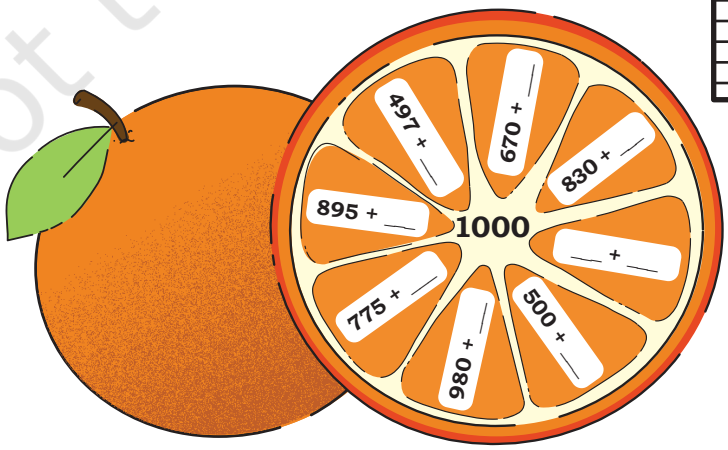
760 + _____ = 1000

e) Mark 400. How much less is 400 than 1000?

_____

1000 – ____ = 400

f) Complete the addition facts leading to 1000.



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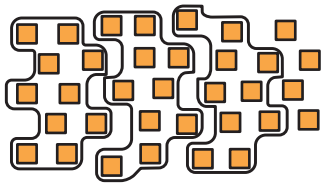
Grouping and Regrouping

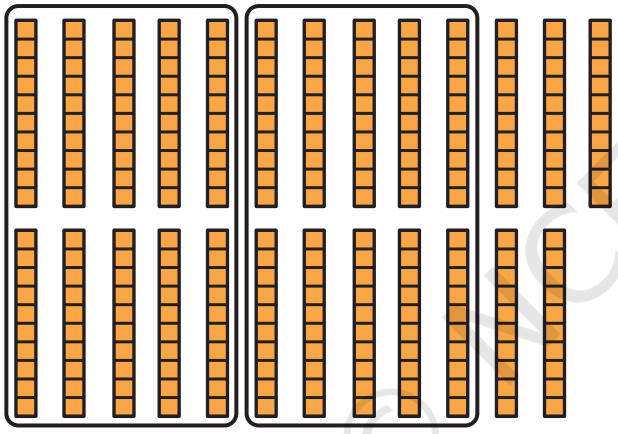
Look at the pictures below. Circle as many groups of 10 Ones or 10 Tens as possible. Write the final number against the following pictures.



30 + 4 = 34

3 Tens + 4 Ones

= 34

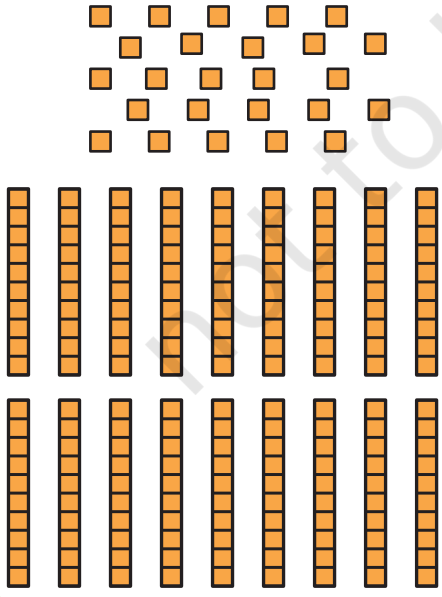


Notice that moving from right to left, digits of the number correspond to Ones, Tens, Hundreds.

200 + 50 = 250

2 Hundreds + 5 Tens + 0 Ones

= 250



_____ + _____ = _____

____ Tens + ____ Ones = _____

_____ + _____ = _____

_____ Hundreds + ____ Tens +

_____ Ones = _____

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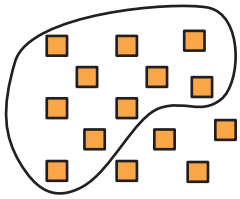
Circle groups of ten 1s, 10s, and 100s as many times as required in each of the following pictures. Fill in the empty boxes.

a)

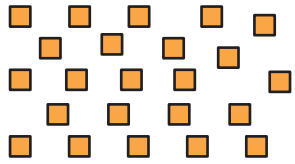


14 Ones

1 Ten + 4 Ones = 14

Tens	Ones
1	4
1 4	

b)

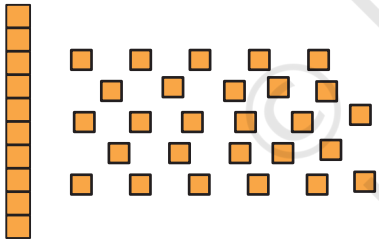


23 Ones

____ Tens + ____ Ones = _____

Tens	Ones

c)

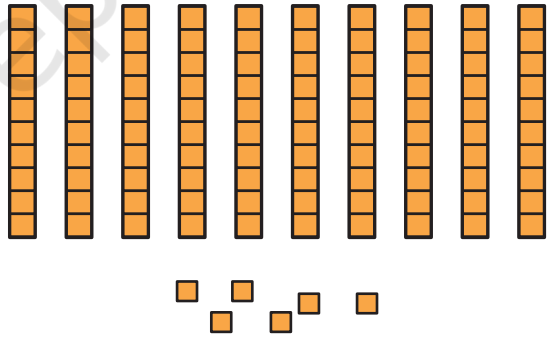


1 Ten and 27 Ones

____ Tens + ____ Ones = _____

Tens	Ones

d)



10 Tens and 6 Ones

__1__ Hundred + __0__ Tens + __6__ Ones = __106__

Hundreds	Tens	Ones
1	0	6
1 0 6		

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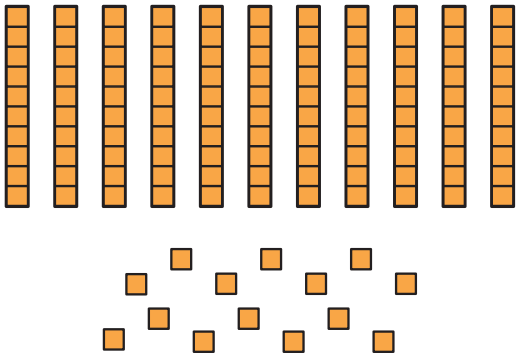
e)

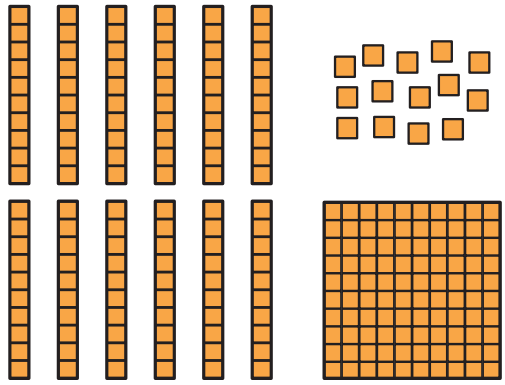


11 Tens and 14 Ones

_____ Hundred + _____ Tens + _____ Ones = _____

Hundreds	Tens	Ones

f)



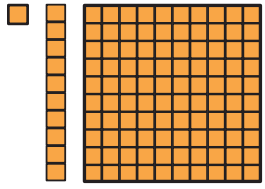
1 Hundred, 12 Tens and 14 Ones

_____ Hundreds + _____ Tens + _____ Ones = _____

Hundreds	Tens	Ones

Let Us Solve

Identify and write the numbers for each of the following in your notebook. Draw pictures like these, if needed.



a) 45 Ones
b) 39 Ones
c) 35 Tens
d) 86 Tens
e) 10 Tens and 1 Ones
f) 15 Tens and 23 Ones
g) 34 Tens and 12 Ones
h) 19 Tens and 10 Ones
i) 2 Hundreds, 13 Tens and 7 Ones

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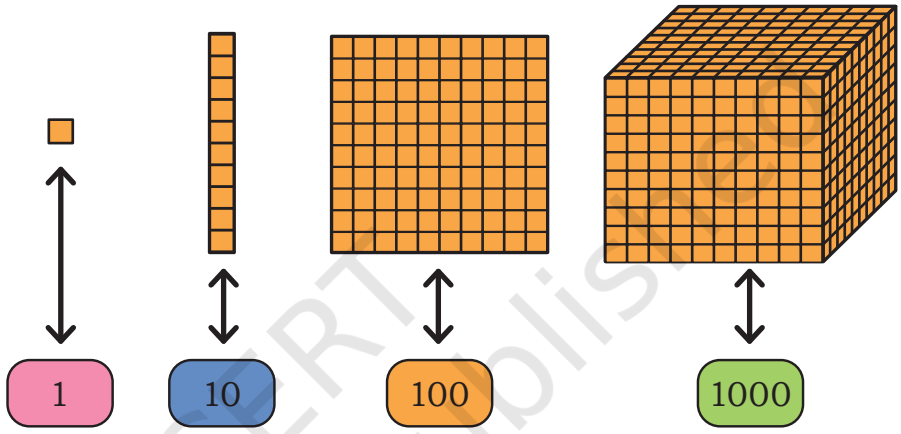
Numbers Beyond 1000 (One Thousand)

Thousands	Hundreds	Tens	Ones
1	0	0	0
1000			

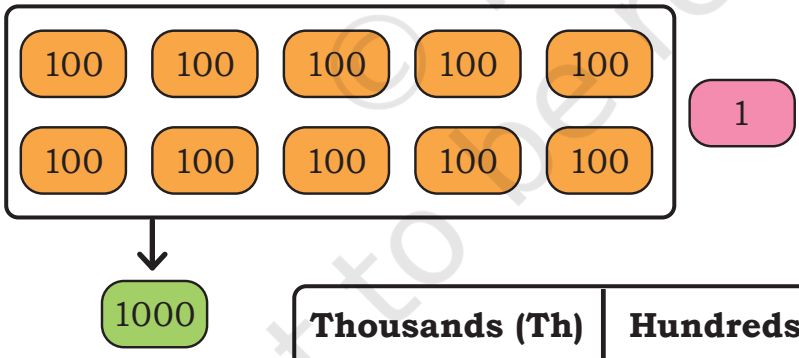
Dienes Blocks



Tokens

1 10 100 1000

We will use tokens in place of Dienes blocks for larger numbers.



Thousands (Th)	Hundreds (H)	Tens (T)	Ones (O)
1	0	0	1
1001			
One thousand one			

1 Thousand + 0 Hundred + 0 Tens + 1 Ones = 1001

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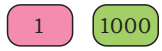
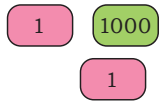
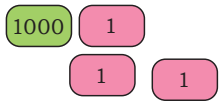
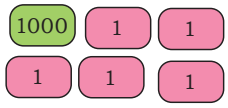
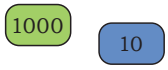
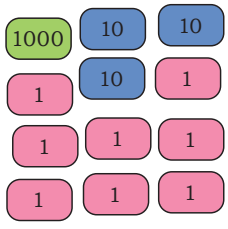
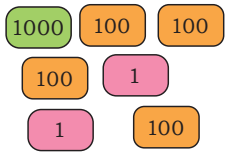
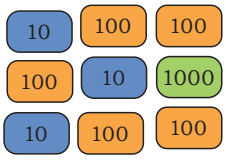
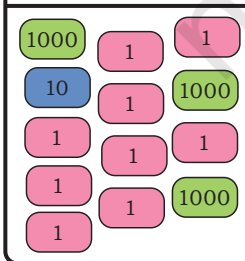
Look at the table below and fill in the blanks.

Tokens	Expanded Form	Th	H	T	O	Number	Number Name
	1000 + 1					1001	
						1002	
						1003	
		1	0	0	5		
							
	1000 + 100					1100	One Thousand One Hundred
						1038	
							
							
	3000 + 0 + 10 + 9						

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Tokens	Expanded Form	Th	H	T	O	Number	Number Name
1000 100 100 10 1000 100 10 1000 10 100 100 1000 100 1 10 1000 1 1000 1 10 1 10 1 1							
1000 10 1000 10 10 1000 10 1000 10 10 1000 1000 10 10 1000 1000 10 1000							

1. Write the numbers in a sequence—forward and backward as indicated.

a)

b)

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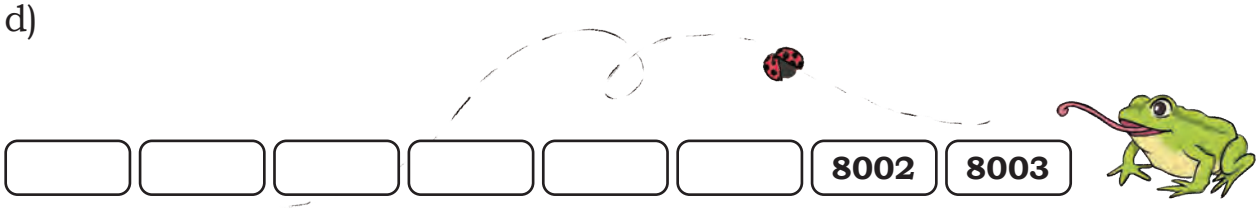
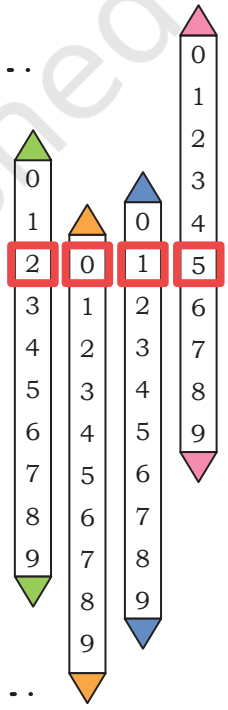
c)

d)



Let Us Play

Make the place value slider. Children can take turns to increase or decrease the number as told.



a) 1895—increase the number by 1

b) 2785—increase the number by 10

c) 3369—decrease the number by 2

d) 5648—decrease the number by 10

e) 6487—increase the number by 20

Let Us Think

1. Ram wrote 7 Thousand 0 Hundreds 2 Tens 4 Ones as 724.

   Is this correct? _____

   Write the correct number _____

2. Richa wrote 5 Thousand 6 Hundreds 0 Tens 3 Ones as 563.

   Is this correct? _____

   Write the correct number _____

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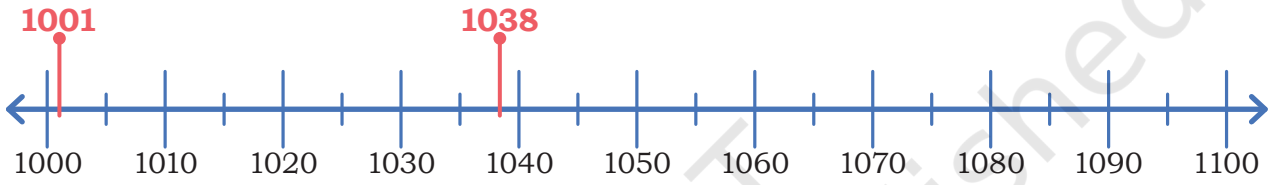
Number Line

1. Which of these numbers lie between 2226 and 3226? Circle the correct answers.

   3316 3236 2236 2216 3126 3216

2. Do as instructed.

   a) 1001 and 1038 are marked on the number line. Try to mark 1043, 1069, and 1084 on the same number line.

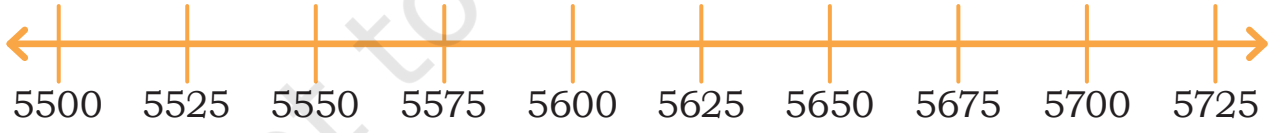


   b) Mark the following numbers on the number line below.

   2025, 2080, 2175, 2245, 2295, 2310, 2390, 2430, 2460

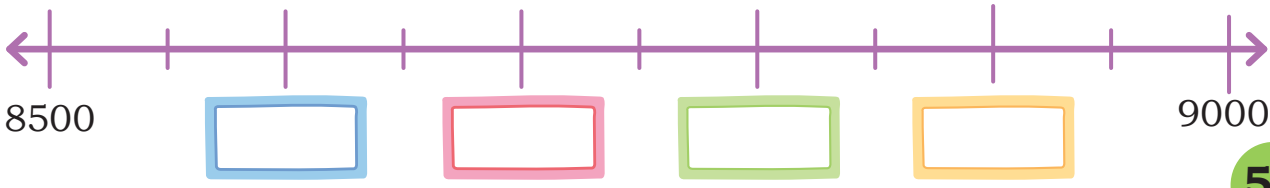
   c) Mark the following numbers on the number line below.

   5512, 5548, 5590, 5636, 5673, 5695



   d) Mark the following numbers on the number line below.

   8679, 8990, 8923, 8763



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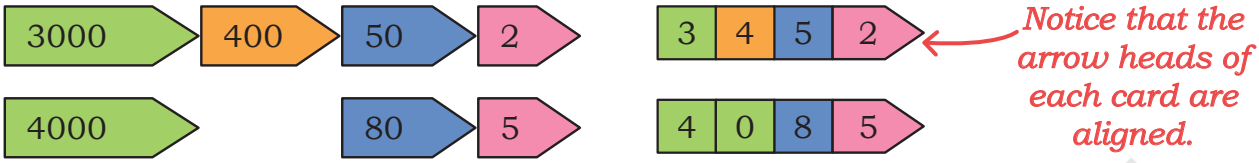
Let Us Play

Use the arrow cards (given at the end of the book) to make different numbers. Take turns giving a number for the grade to make using the arrow cards. Read aloud the number and express them in expanded form and in words.



3452 is made up of the cards 3000, 400, 50 and 2.

The expanded form of 3452 is 3000 + 400 + 50 + 2.

In words, 3452 is three thousand four hundred fifty two.

What cards are used to make 4085? Write it in expanded form and in words.

Find Me! Read aloud the numbers and locate them in the grid.

1	2	3	4	8	0	3	9
5	7	2	0	2	5	7	6
2	5	7	6	0	3	8	7
1	6	1	9	2	2	2	2
0	5	0	1	0	1	1	1
1	3	0	1	2	1	1	1
9	4	8	3	6	1	1	1

1. The number 3782.
2. Two thousand five hundred and seventy six.
3. A 4-digit number with all digits the same.
4. The smallest 4-digit number in this table.
5. The largest 4-digit number in this table.
6. A number more than 5000 and less than 5200.
7. A number between 5600 and 6300.
8. A 4-digit number all of whose digits can be found on a die.

Note for Teachers: Ensure that children use the appropriate cards and that the arrows of each card overlap. They should not pick up individual digits, but appropriate Thousands, Hundreds, Tens and Ones. Teacher to point out the place-holder use of '0' in writing numbers in the Indian place value system.

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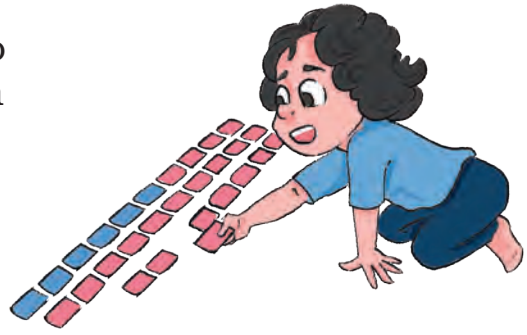
Let Us Solve

1. Use tokens of 1s, 10s, 100s, 1000s to identify the numbers and write them in the table.



a) 6 Tens and 22 Ones
b) 4 Tens and 12 Ones
c) 3 Hundreds, 14 Tens, and 8 Ones
d) 12 Hundreds, 18 Tens, and 2 Ones
e) 1 Thousand, 5 Hundreds, 10 Tens, and 17 Ones

	Th	H	T	O	Number
a	0	0	8	2	82
b					
c					
d					
e					

2A. Circle the number that is bigger.

30 or 300
6000 or 600
6000 or 3000

2B. Circle the number that is smaller.

2 Ones or 2 Hundreds
5 Tens or 2 Thousands
7 Tens or 4 Hundreds

Note for Teachers: (1) Draw attention of children to the use of only ten digits 0–9 for writing all numbers, however large. Also, draw their attention to the order in which we read and write—first Thousand, then Hundred, then Tens, and finally Ones. (2A&2B). This exercise is to check that students understand the importance of units. 2 Hundreds is always more than 2 Tens or 2 Hundreds is more than 9 Tens.

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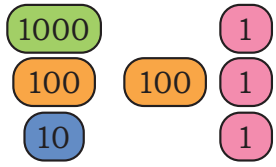
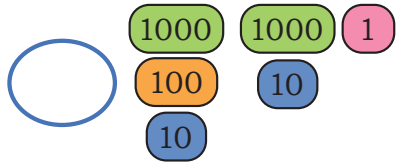
COMPARING NUMBERS

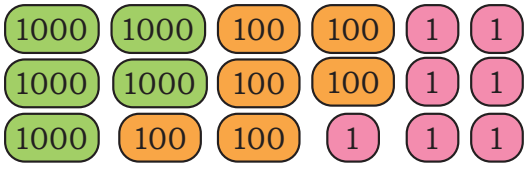
Jaspreet and Gulnaz help to keep a record of the number of plates used in the Gurudwara every month. Use the signs <and> to find the month when a larger number of plates were used.



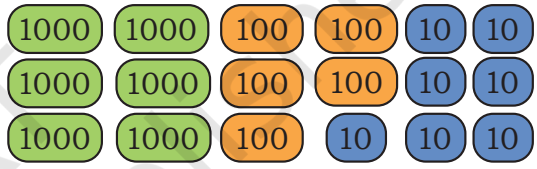
February: 1213



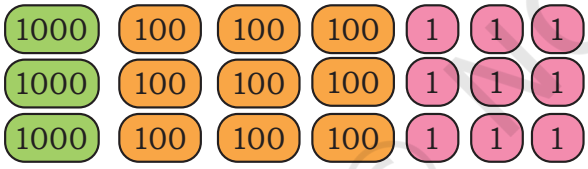
March: 2121



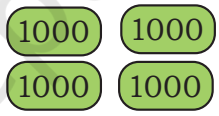
September: _____



October: _____



November: _____



December: _____

Compare the numbers using the signs <and>.

Why is 3102 bigger than 3012?

3012			
Th	H	T	O
3	0	1	2

3102			
Th	H	T	O
3	1	0	2

Describe how you decided which number is the bigger one. Which position (Th, H, T, O) helped you to decide this?

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Let Us Do

1. Compare the following pairs of numbers using < and >. Make a Th, H, T, O table, if necessary. Share your thoughts with the class.

a)	2190		2910	c) 1009		9001
b)	7087		7088	d) 982		1024

2. Order the prices of the following objects from smallest to biggest (increasing order).

₹ 1986

₹ 1099

₹ 1899

[ ] < [ ] < [ ]

3. The following women international cricketers have played 200 ODIs (One-Day International Matches). Listed below are their scores. Arrange the runs scored by them in increasing order (from lowest to highest).

Debbie Hockley	4064
Suzie Bates	5114
Karen Rolton	4814
Mithali Raj	7805
Charlotte	6002

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4. Arrange the following mountain ranges in decreasing order of height (from highest to lowest).

Mountain Range	Height (in meters)
Kangchenjunga	8586
Mullayanagiri	1930
Chaukhamba I	7138
Bailadila Range	1276
Nanda Devi	7816
K2	8611
Kalsubai	1646

5. Use the signs <, =, > to compare the following.

a) 2 Tens + 4 Thousands + 3 Hundreds ◯ 2043

b) 2 Tens + 4 Thousands + 3 Hundreds ◯ 4320

c) 2 Thousands + 9 Hundreds + 9 Tens + 9 Ones ◯ 3000

d) 15 Ones + 9 Tens + 3 Hundreds ◯ 1593

e) 5000 + 30 + 4 ◯ 5034

f) 5000 + 300 + 4 ◯ 5340

6. Fill the blanks with digits 0–9 such that the numbers meet the condition.

a) 7__3 < 768__ b) 853__ < 8__3__

c) __2__1 < 5__2__

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CHALLENGE!

There are 99 numbers strictly between 700 and 800 excluding 700 and 800. How many numbers are there strictly between 7000 and 8000?

Circle the correct answer:

900 999 1000

Let Us Explore

1. Make as many four-digit numbers as possible using the digits 2, 3, 4, 7 without repetition. There are 24 different numbers possible. Find as many as you can and arrange the numbers in decreasing order in your notebook.
2. Compare with your friends to find what other numbers they have made. See if all of you together can come up with all the 24 numbers. How do you know that you have all possible such numbers?

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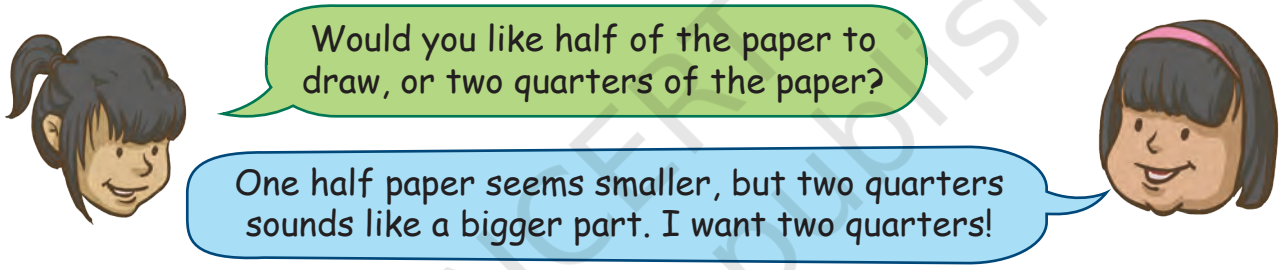
Chapter
5

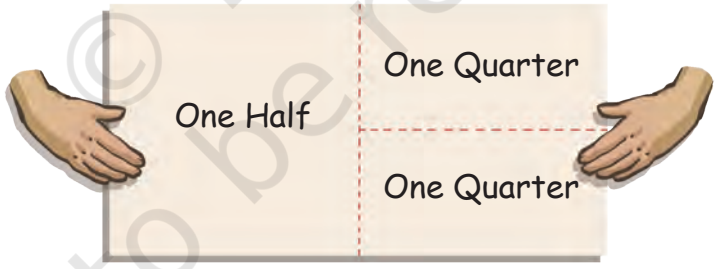
Sharing and Measuring

0433CH05

PARTS AND WHOLES

Ikra and her little sister, Samina, decide to make a drawing, but they are left with a single drawing sheet. Ikra wants to share the paper by dividing it in half, but Samina insists on having a bigger part of the paper. Ikra thought for a moment and proposed a solution.





Let Us Discuss

1. Which part of the paper you would have chosen—one half or two quarters? Why?
2. Do you think Ikra shared the paper equally? Why? Try with a paper.
3. How do you know that the paper has been divided equally?
4. Why do you think Samina chose two quarters of the paper?

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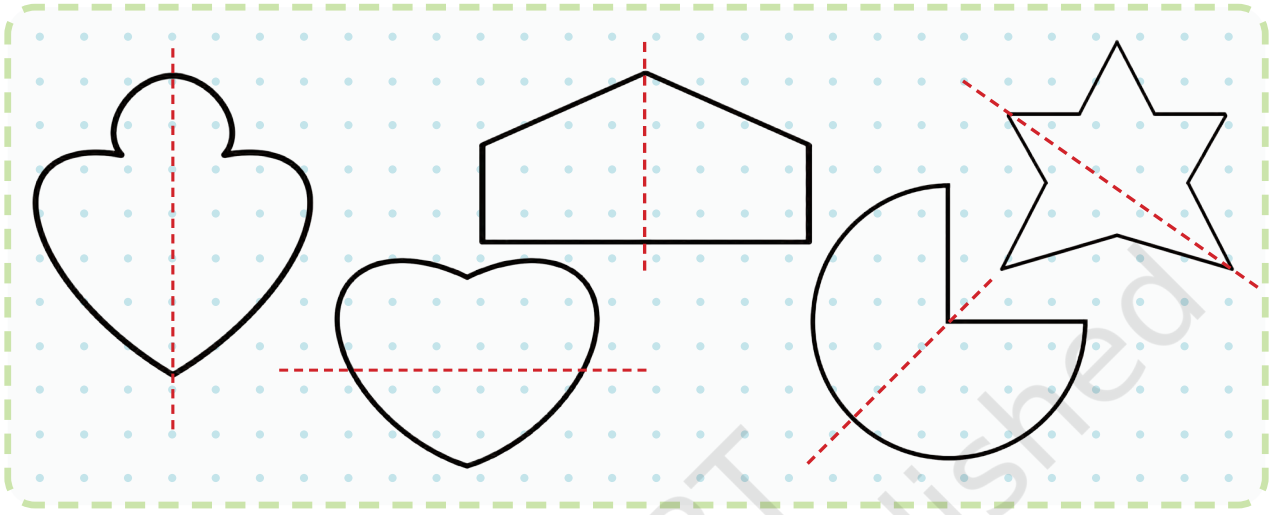
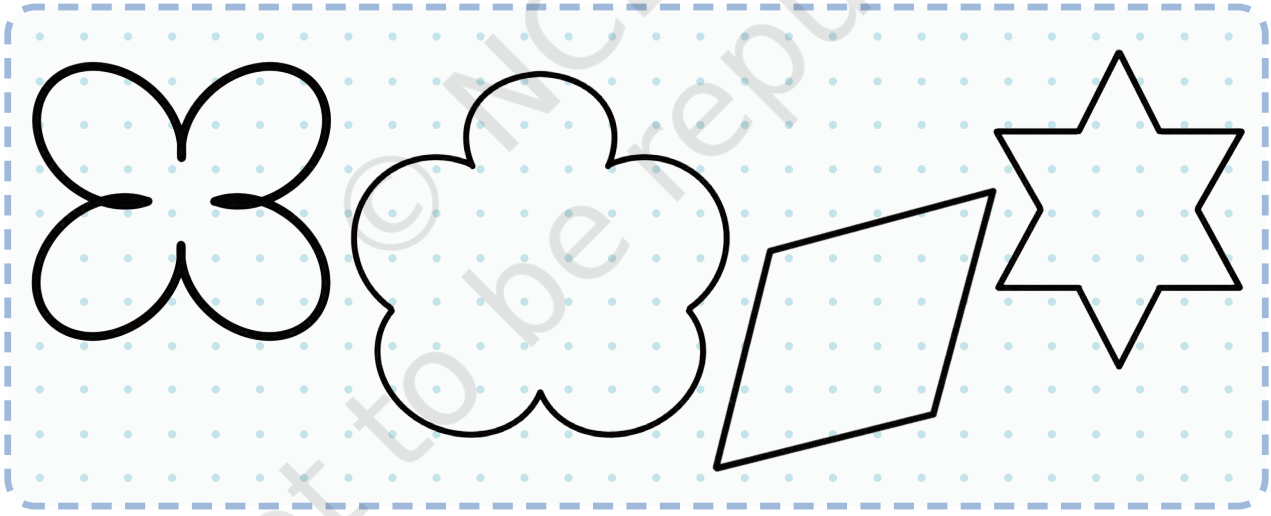
Let Us Do

1. Samina has divided some figures into two parts. Colour the figures that are divided into halves correctly. How did you get the answer?



2. Divide the shapes into halves by drawing a line.



When an object is divided into two equal parts, then each part is called a half. We write half as $\frac{1}{2}$.

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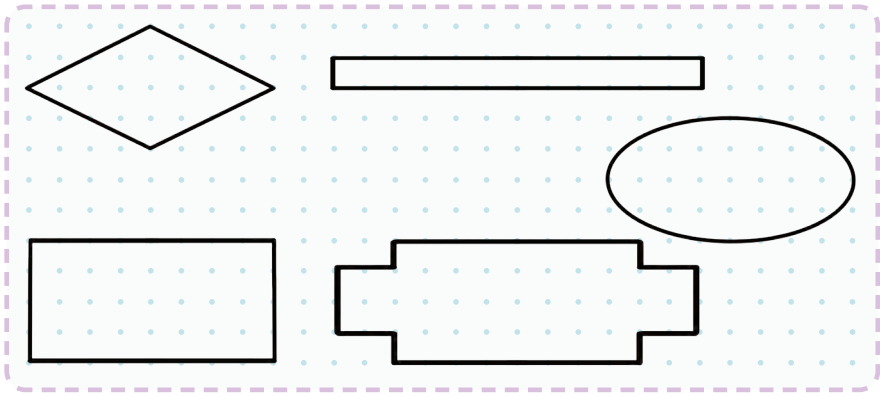
3. Divide these shapes into 4 equal parts/quarters.



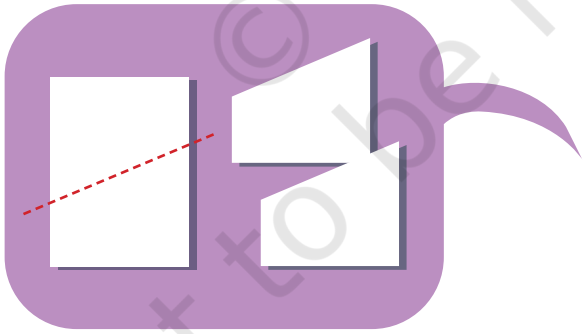
When an object is divided into four equal parts, then each part is called a quarter. We write quarter as $\frac{1}{4}$.

Think: How would we write the fraction for each part if we divided an object into 5 equal parts?

Many Ways to Make Halves and Quarters

Let Us Try

1. In how many different ways can you fold/cut a rectangular paper in two equal parts? Try it with a rectangular paper.



Note for Teachers: Guide students to write fractions using symbols. Begin with examples like $\frac{1}{2}$ and $\frac{1}{4}$. Provide numerous opportunities for practice with other fractions by paper folding and drawing images.

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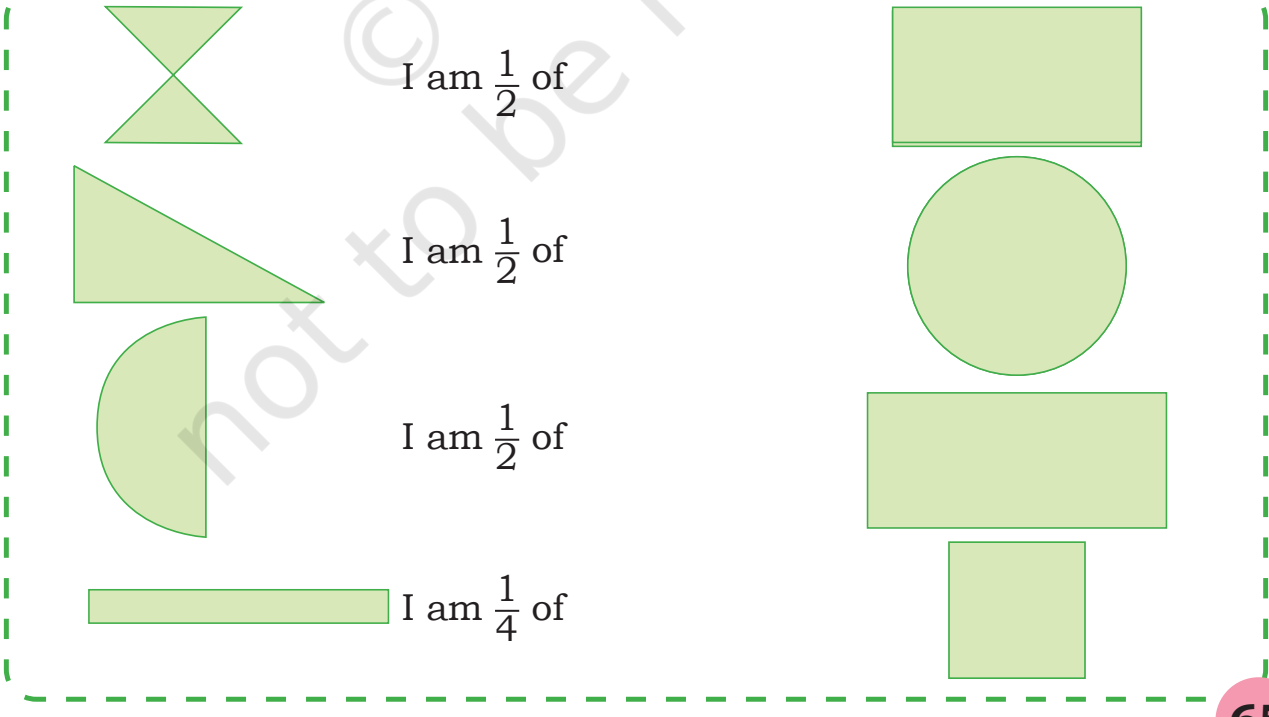
2. Now try to draw and show five different ways in which we can fold/ cut a rectangle into four equal parts ($\frac{1}{4}$ or quarter).

3. Match the following parts with their corresponding wholes.



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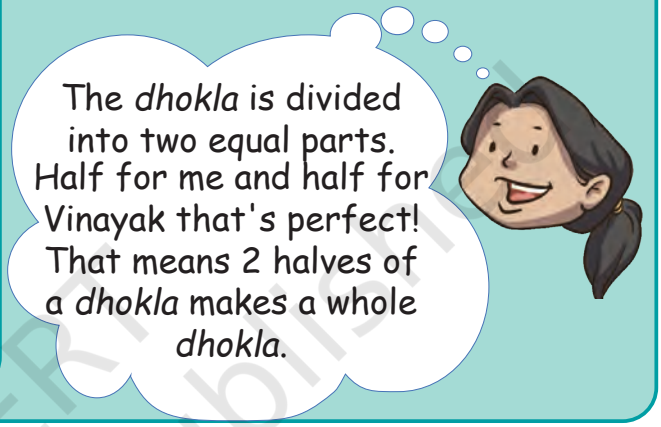
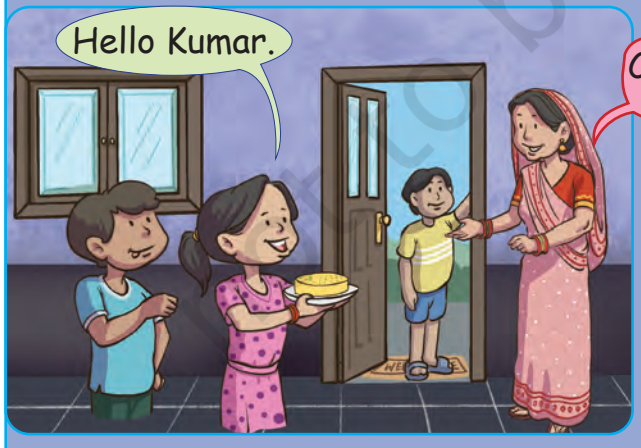
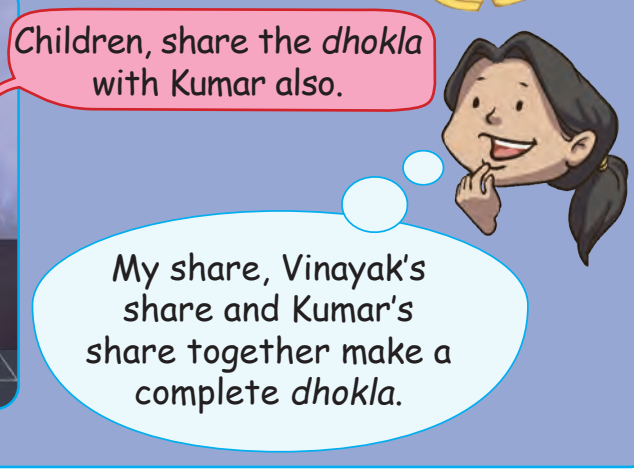
DING DONG BELL!!

Sumedha's mother made yummy dhokla!



DING DONG! The doorbell rang.





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DING DONG! Sumedha's cousin Paridhi arrives.

The *dhokla* is divided into four equal parts. Each one of us will get one-fourth of the *dhokla*.

DING DONG! Their neighbour Idha arrives filling the house with happy greetings.

More sharing!!! An even smaller slice for me now. I will get just $\frac{1}{5}$ of my favourite *dhokla*.

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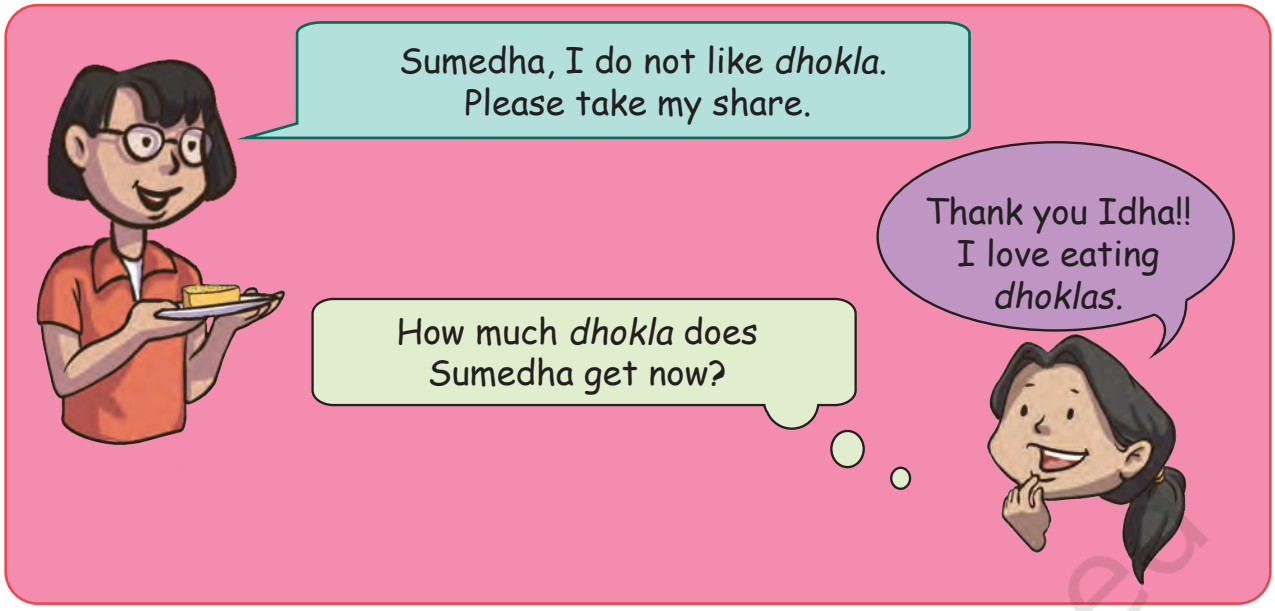

Let Us Discuss

1. What is Sumedha observing about her share as each guest comes in?
2. In which situation will Sumedha get to eat more *dhokla*: when shared among 9 people or 11 people?
3. How many pieces of $\frac{1}{6}$ would make a complete *dhokla*?
4. What would be Sumedha's share, if Idha and Vinayak both give their share of *dhokla* to her?

Let Us Do

1. How much *dhokla* would each person get if it was shared equally among 6 people? Try also with 8 people. Who will get the bigger pieces of *dhokla*? Draw and explain.

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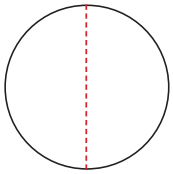
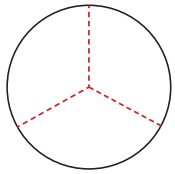
2. Shade a portion of the *dhokla* to represent the fraction Sumedha would get when the *dhokla* is shared equally among the given number of people. Discuss why the fractions get smaller.



2 people

Sumedha's share = $\frac{1}{2}$

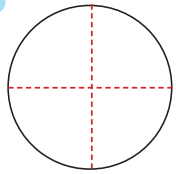
Half



3 people

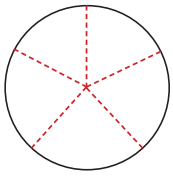
Sumedha's share = $\frac{1}{3}$

One-third



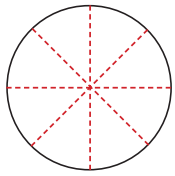
4 people

Sumedha's share =



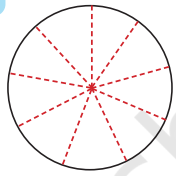
5 people

Sumedha's share =



8 people

Sumedha's share =



9 people

Sumedha's share =

Let Us Discuss

Use the fraction kit given at the end of your textbook and answer the following questions.

1. Share your observations about the different pieces and the whole.
2. Take any two different pieces of the fraction kit and compare them. Discuss which one is smaller and why.
3. Sumedha noticed that when a whole is equally divided in a larger number of parts, each part gets smaller. Do you agree with Sumedha?
4. Sumedha says, "When I join 5 pieces of $\frac{1}{5}$, it makes a whole *dhokla*." Try to do it yourself with your fraction kit.
5. Sumedha says that this part is one-third of the complete whole. Why is she saying so?

Note for Teachers: Narrate the story of *dhokla* using a circular paper to help students understand that sharing among a larger number of people leads to a smaller share for each person.

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Let us try to fill in the blanks. Both the fractions are parts of the same whole. Use your fraction kit, if necessary. Share your thoughts.

1. _____ is greater than _____ ($\frac{1}{5}$, $\frac{1}{4}$).
2. _____ > _____ ($\frac{1}{9}$, $\frac{1}{6}$).
3. $\frac{1}{6}$ ____ $\frac{1}{8}$.
4. _____ is smaller than _____ (____ , ____).

My Flower Garden

Idha has seeds of 5 different flowering plants—Rose, Mogra, Lily, Marigold, and Jasmine. She decides to plant them equally in her garden as shown in the picture.

Rose Mogra Lily Marigold Jasmine

I have very few Lily seeds so I will plant Roses in two parts.

Her revised plan is shown here.

Look at the garden and answer the questions.

Mogra in $\frac{1}{5}$ or one-fifth part of the garden.

Marigold in _____ part of the garden.

Jasmine in _____ part of the garden.

Rose in $\frac{1}{5}$ and $\frac{1}{5}$ part or a total of $\frac{2}{5}$ (two-fifths) part of the garden.

Look at the garden and answer the questions.

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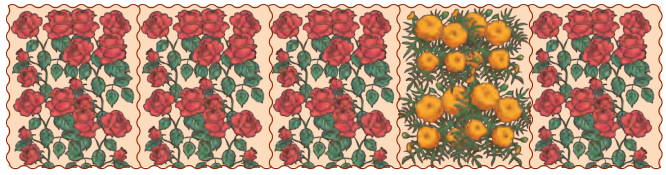
Mogra in _____ part.

Marigold in _____ part.

Rose in $\frac{1}{5} + \frac{1}{5} + \frac{1}{5}$ part or a total of $\frac{3}{5}$ (three-fifths) part.

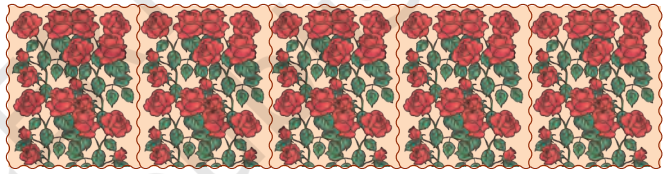
Look at the garden and answer the questions.



Marigold in _____ part.

Rose in $\frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5}$ or a total of $\frac{4}{5}$ (four-fifths) part.

Rose in $\frac{5}{5}$ part or the complete garden.



Let Us Do

Make a flower garden with seven flowering seeds—Mogra, Marigold, Jasmine, Rose, Lily, Hibiscus, and Periwinkle?

Mogra

a) Marigold in one-seventh ($\frac{1}{7}$) and Rose and Hibiscus in three-sevenths ($\frac{3}{7}$) part each.

Rose

Marigold

b) Lily in three-sevenths ($\frac{3}{7}$), Marigold in two-sevenths ($\frac{2}{7}$) and Periwinkle in another two-sevenths ($\frac{2}{7}$).

Lily

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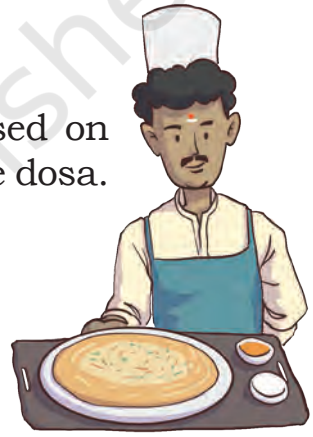
Jasmine

c) Mogra in five-sevenths ($\frac{5}{7}$) part and Hibiscus in two-sevenths ($\frac{2}{7}$).

Hibiscus

Periwinkle

DREAM DOSA DESIGNER!!

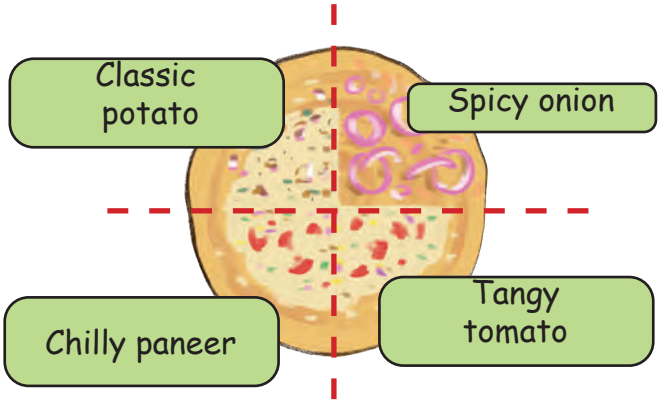


Karan makes dosas differently. He makes dosas based on the customer's choice with various toppings on a single dosa. Customers can choose from the following toppings:

1. Classic potato
2. Spicy onion
3. Chilly paneer
4. Tangy tomato

Help Karan in making these special dosas.

Flavour of Dosa	Part of the Dosa
Classic potato	$\frac{1}{4}$
Spicy onion	$\frac{1}{4}$
Chilly paneer	$\frac{1}{4}$
Tangy tomato	$\frac{1}{4}$



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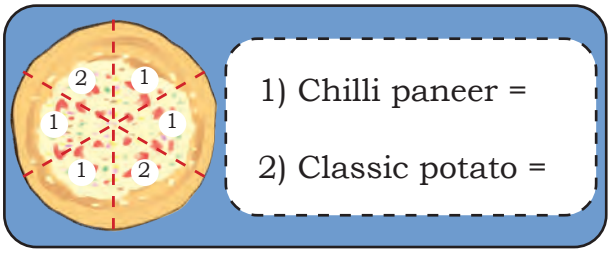
Do It Yourself

Write the fractions for each of the toppings in the following dosas.



1) Chilli paneer =

2) Classic potato =

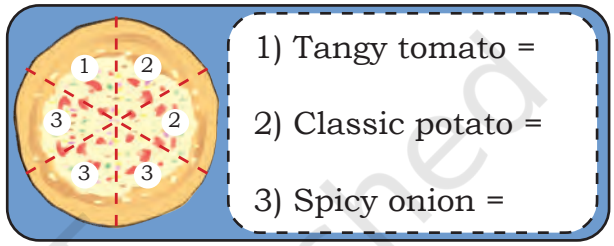
1) Tangy tomato =

2) Classic potato =

3) Spicy onion =

1) Spicy onion =

2) Tangy tomato =



1) Tangy tomato =

2) Classic potato =

3) Spicy onion =

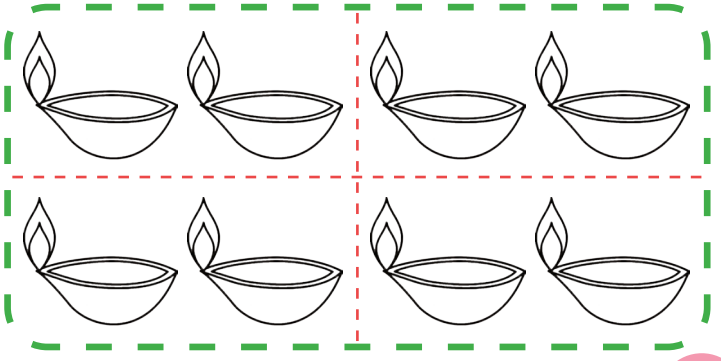
Now you can make different dosas based on demand.

Make a dosa with $\frac{2}{3}$ topping of Spicy onion, $\frac{1}{3}$ of Classic potato.

Make a dosa with $\frac{3}{8}$ of Classic potato, $\frac{1}{8}$ of Chilly paneer and $\frac{4}{8}$ of Tangy tomato mix.

Let Us Explore

Meena has 8 diyas. Colour $\frac{1}{4}$ of her diyas red. To find $\frac{1}{4}$, let us divide the number of diyas into 4 equal parts. Can you see how to divide the diyas into 4 equal parts? Now colour 2 diyas red.



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Let Us Do

Now let us try to find fractions for the situations given below. Circle the appropriate parts in the pictures.

1. There are 12 cookies. What fraction of cookies will each get if the number of children are as follows:

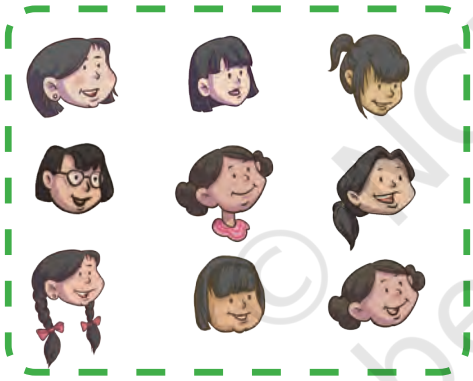
   a) 3 children

   b) 6 children

   c) 2 children

   d) 4 children

5. Simran calls her school friends for her birthday party. $\frac{1}{3}$ of her friends receive a hairband as their return gift. Place hairbands on $\frac{1}{3}$ of her friends.



6. Draw flowers in $\frac{1}{5}$ of the given number of pots.

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Let Us Find Fractions in Our Surroundings

Kadamba is excited to know where we use fractions in daily life. She found some examples below. Help her find more examples and try to draw the images of the same in your notebook.

1. Yesterday Mummy asked to divide a box of *barfis* into four equal parts. There are 16 *barfis* in the box. Draw a picture of 16 *barfis* and find $\frac{1}{4}$ of the whole. How many *barfis* are in each part?

2. Rohan has a piece of ribbon to decorate his notebook. Mohan's ribbon is one-fourth as long as Rohan's ribbon. How long will Rohan's ribbon be? Draw it.

   Mohan's Ribbon

Try Yourself

Observe your surroundings and think of situations where we use fractions and write any two of them in the space provided below.

1. _____

   _____

   _____

2. _____

   _____

   _____

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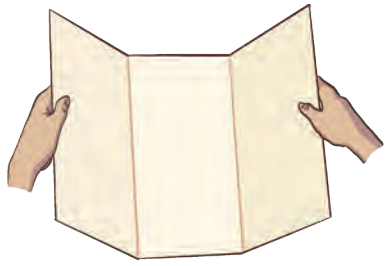
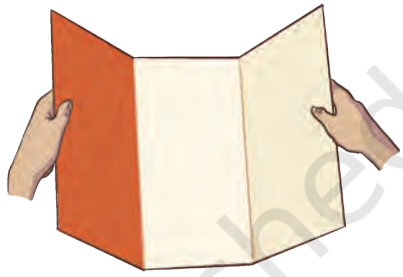
Let Us Do

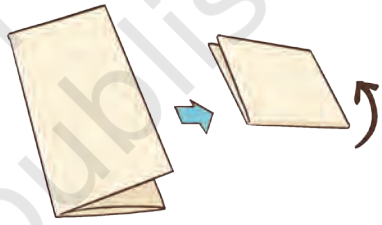
1. Take a rectangular piece of paper and fold the paper into three equal parts and then unfold it.



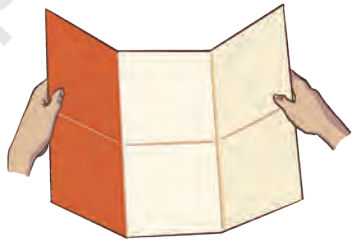
2. Colour one of the three equal parts as shown in the image.



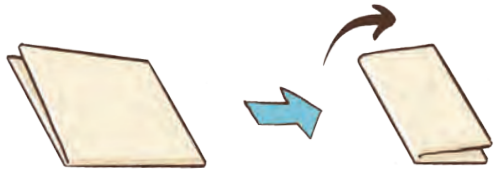
3. Fold the paper back into three equal parts like before, and then fold it in half.



4. Observe the colored part. What is the fraction for the shaded part now? What does this mean?

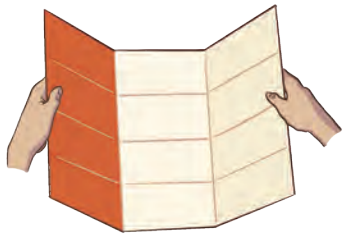


5. Fold the paper again and check how the coloured part changes.



6. Write down what fraction you observe after each fold.

$\frac{1}{3} = \frac{2}{6} =$ ____ $=$ ____ $=$ ____



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Let Us Try

Take another piece of paper and try the same starting with two equal parts, and halving every time. Share the findings with your friends.

$\frac{1}{2} = \frac{2}{4} =$ _____ = _____ = _____

Let Us Discuss

Observe the fraction chart and discuss the following questions. You may use your fraction kit also to explore the answers.

1. How many $\frac{1}{4}$s are equal to $\frac{1}{2}$?

   _____

2. Is $\frac{2}{3}$ less than or greater than $\frac{1}{2}$?

   _____

3. Ten pieces of $\frac{1}{10}$ make a complete whole. Is this statement true?

   _____

4. Three pieces of $\frac{1}{6}$ are equal to two pieces of $\frac{1}{8}$. Is this true?

   _____

5. How many pieces of $\frac{1}{8}$ make $\frac{1}{4}$?

   _____

1									
$\frac{1}{2}$	$\frac{1}{2}$								
$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$							
$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$						
$\frac{1}{5}$	$\frac{1}{5}$	$\frac{1}{5}$	$\frac{1}{5}$	$\frac{1}{5}$					
$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$				
$\frac{1}{7}$	$\frac{1}{7}$	$\frac{1}{7}$	$\frac{1}{7}$	$\frac{1}{7}$	$\frac{1}{7}$	$\frac{1}{7}$			
$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$		
$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	
$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$

6. Find the pieces that you can put together to make another bigger piece.

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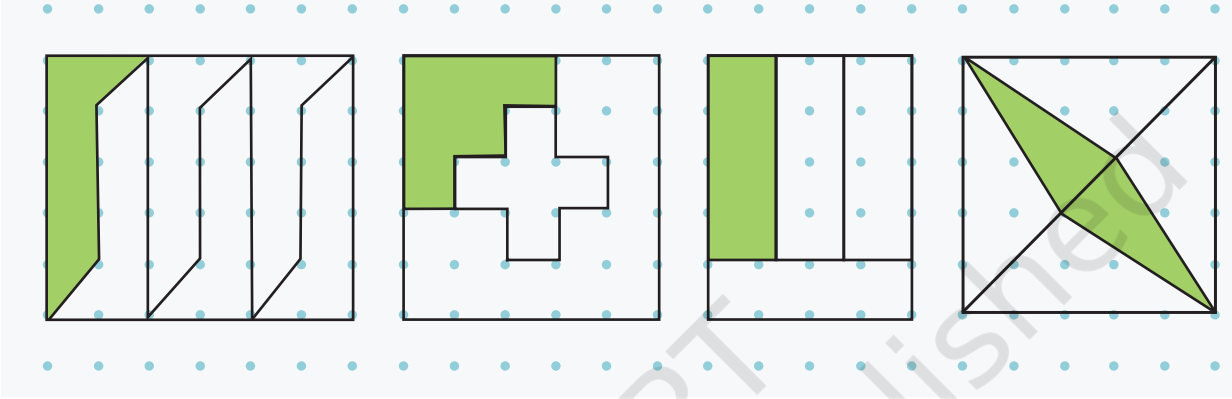
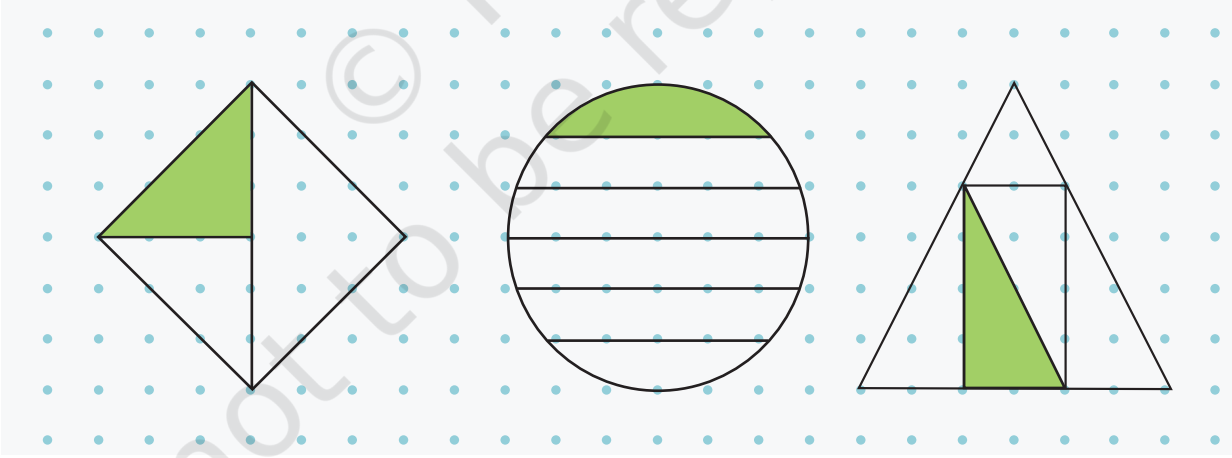
Let Us Do

1. Bablu is playing with square shapes. He wants to cut them in such a way that each piece is equal in size. Circle the squares which have been cut into equal parts. Write the fraction for the shaded part, whenever possible.



2. Check if the children's claim below about the shaded parts of each of the pictures is correct. Circle the ones which you think are correct, cross out the ones which are not correct. You can draw additional lines to make the parts equal. Discuss your thinking.



Ameena says: $\frac{1}{3}$

Kishore says: $\frac{1}{4}$

Perry says: $\frac{1}{6}$

Kunj says: $\frac{1}{3}$

Balu says: $\frac{1}{5}$

Gita says: $\frac{1}{4}$

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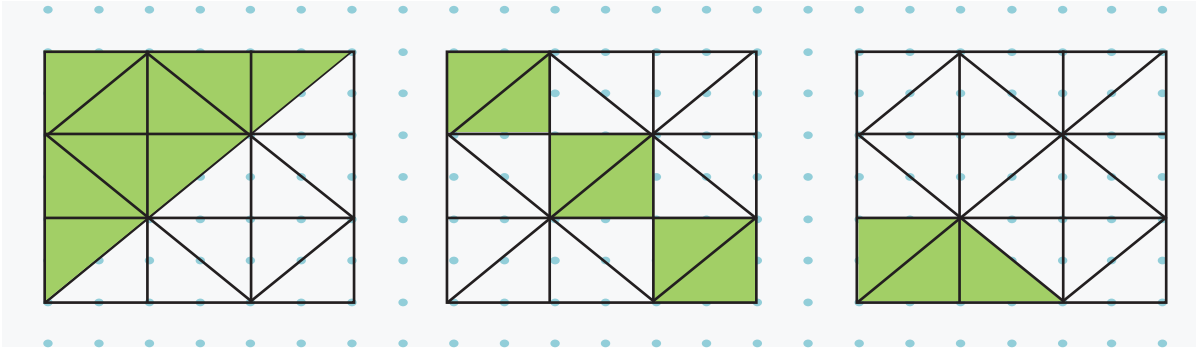
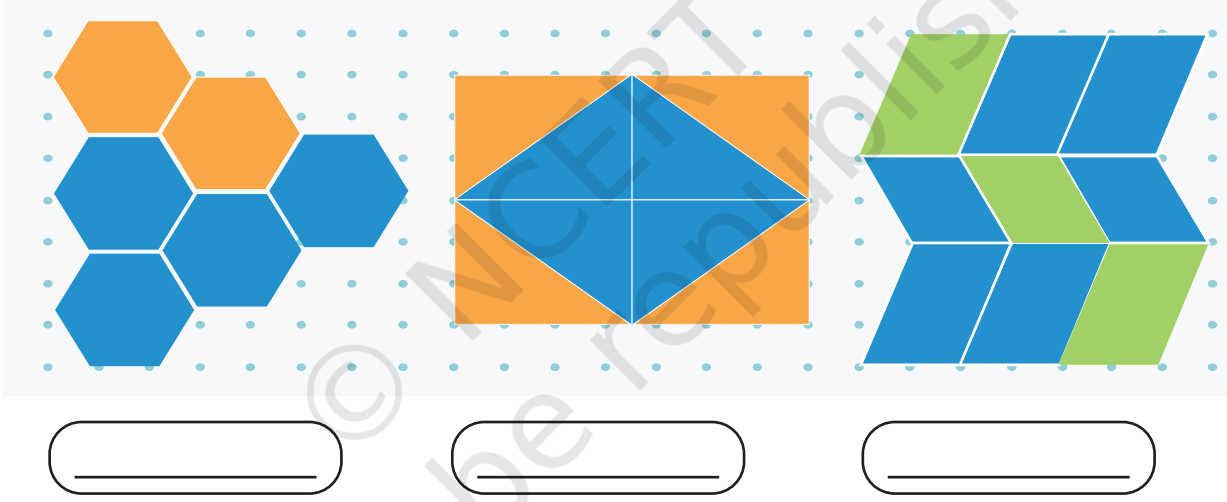
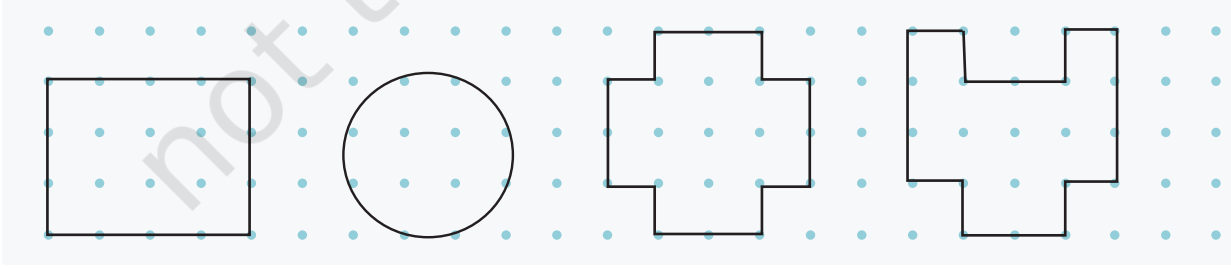
3. Identify the fractions represented by the coloured parts in the given pictures.



4. Identify the fraction of the whole that the blue parts make in each of the pictures given below.



5. Divide the following into equal parts and shade the appropriate parts in each.



Shade $\frac{2}{3}$

Shade $\frac{4}{6}$

Shade $\frac{1}{4}$

Can you also show $\frac{1}{8}$?

Shade $\frac{3}{4}$

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Chapter 6

Measuring Length

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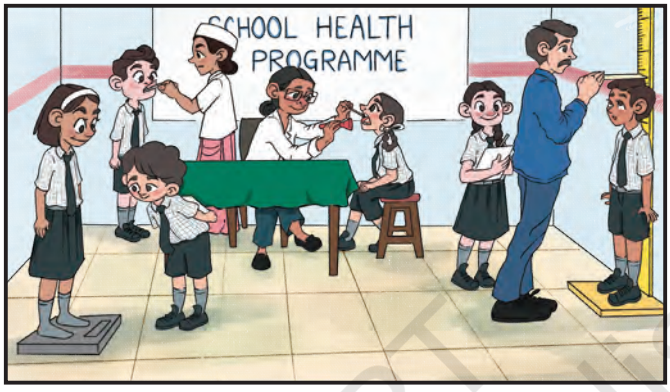
Let Us Observe



1. Look at the picture. What are the students measuring? Put a tick mark (✓) if you find it being measured.

   a) Length ☐ c) Weight ☐ e) Breadth ☐

   b) Height ☐ d) Depth ☐ f) Temperature ☐

2. What is being used to measure the height? What other tools can be used to measure height?

3. Recall in Grade 3 you studied that lengths are measured in metres. Check and fill in the blanks whether the following are correct/incorrect for your classroom.

   a) The height of most of the students in my grade is more than a metre. _____

   b) The length of my arm is less than a metre. _____

   c) The height of the door of the grade is less than a metre. _____

   d) The breadth of the blackboard is more than a metre._____

Note for Teachers: The words tall, wide, short and long are used in daily life. Discuss with students that height, width, depth, breadth all refer to length measurement. These words are used depending on different situations and orientation. At this point students only need to understand that all these words denote length.

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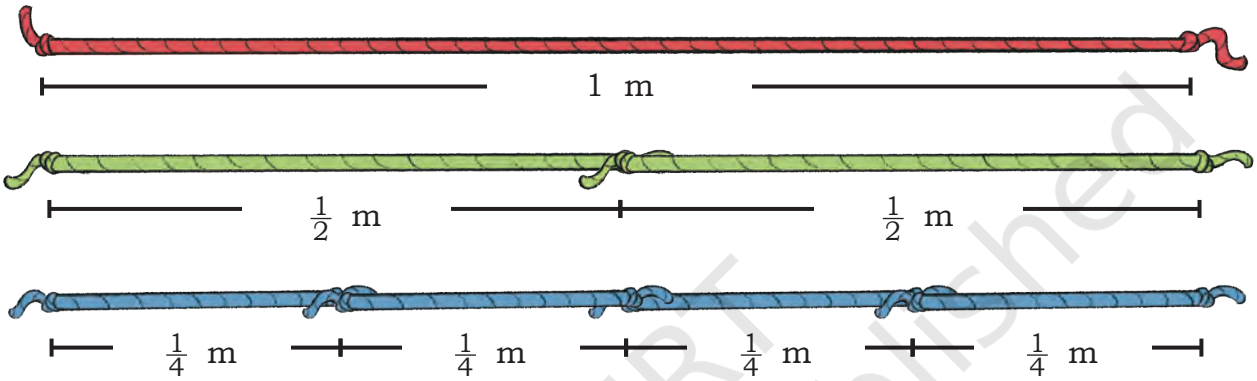
Measuring is Fun

Remember we made,

1 metre (m),

half metre ($\frac{1}{2}$ m), and

quarter metre ($\frac{1}{4}$ m) ropes. Let us make them again.



Do you notice 1 m = $\frac{1}{2}$ m + $\frac{1}{2}$ m and 1 m = $\frac{1}{4}$ m + $\frac{1}{4}$ + $\frac{1}{4}$ m + $\frac{1}{4}$ m

and $\frac{1}{2}$ m = $\frac{1}{4}$ m + $\frac{1}{4}$ m.

Let Us Do

Use your ropes to carry out the following activities. You can use a combination of ropes, if needed.

1. Walk, Jump, and Crawl on 1, 5 and 10 m line

Draw lines of 1 m, 5 m, and 10 m on the floor of the classroom or outside in the playground.

How will you make these lines? Think and share with your friends. Walk, jump, and crawl on the lines.

Note for Teachers: Making the lines by repeatedly using *metre* rope and walking, jumping and crawling on the lines will help students develop an estimate of how big 5 m and 10 m is. They will be able to use this experience to estimate and compare other lengths in their surroundings.

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2. Long Jump

Each child can participate in a long jump competition. How far have your friends jumped? Measure as accurately as possible using a combination of ropes. Who jumped the longest distance?

Fill the following table.

Who has jumped the shortest?

Name of the student	Estimated length of the jump			Actual measurement
	Less than 1 m	1 m	More than 1 m	

3. Estimate how long and broad is your classroom. Measure and check.

Note for Teachers: Allow children to measure 100 m using their footstpes and note how many footsteps fit in 100 m. This can be used for further estimations.

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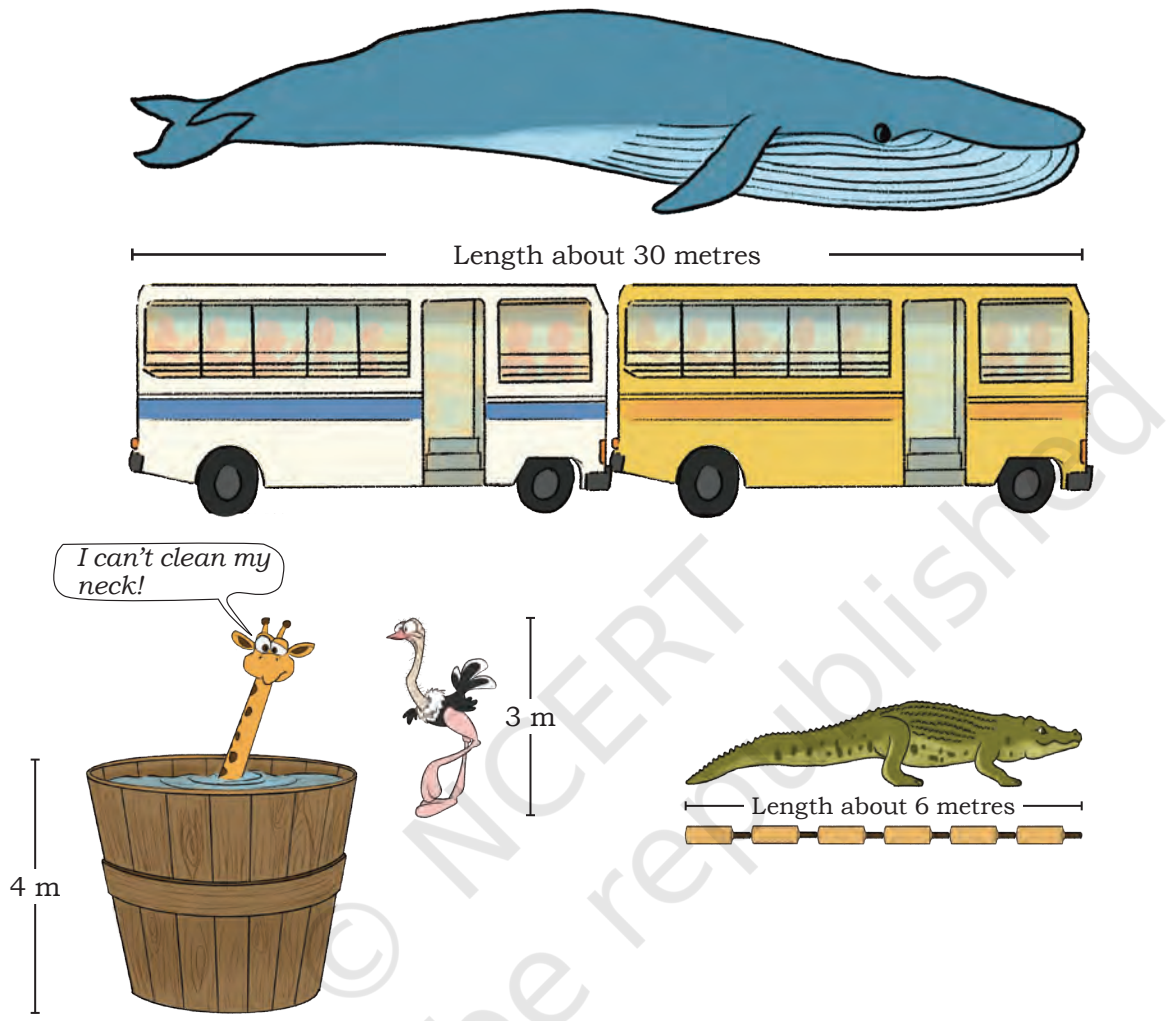
Let Us Think: Guess the Length



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Look at the pictures carefully and answer the questions.

1. What is the length of one bus in metres? What is the length of one cricket bat in metres?
2. How many buses would be equal to the length of two blue whales?
3. How many cricket bats will be needed to measure one whale?
4. If two ostriches stand one above another, their height will be equal to the height of _____.
5. How many crocodiles will be equal to the length of a blue whale?

Measuring Small Things

Can you think how to measure a small thing like an eraser or a rice grain?

We need a smaller unit to measure such small items. Observe a standard metre scale. You can see the scale is divided into 100 equal parts.

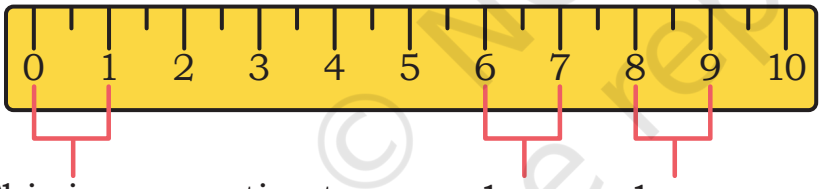
The length of each one of these parts has a special name called **Centimetre (cm).**

Let Us Observe

Chutki wants to keep track of the increase in height of her plant.

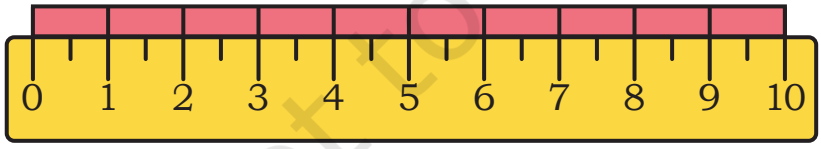
Compare the metre rope with the measuring tape used by a tailor. Is the length of both the same or different?

Observe the measuring tape carefully. What do you notice?



This is one centimetre. 1 cm 1 cm

Discuss how these marks help us measure clearly.



The length of each red bar is 1 cm.

The red bar is repeated 10 times to make 10 cm. When we repeat the length of the red bar 100 times, we will get 1 metre scale/tape.

1 metre (m) = 100 centimetre (cm)

$\frac{1}{2}$ m = _____ cm, $\frac{1}{4}$ m = _____ cm

Now use the measuring tape/scale to see how tall your plants grow every week.

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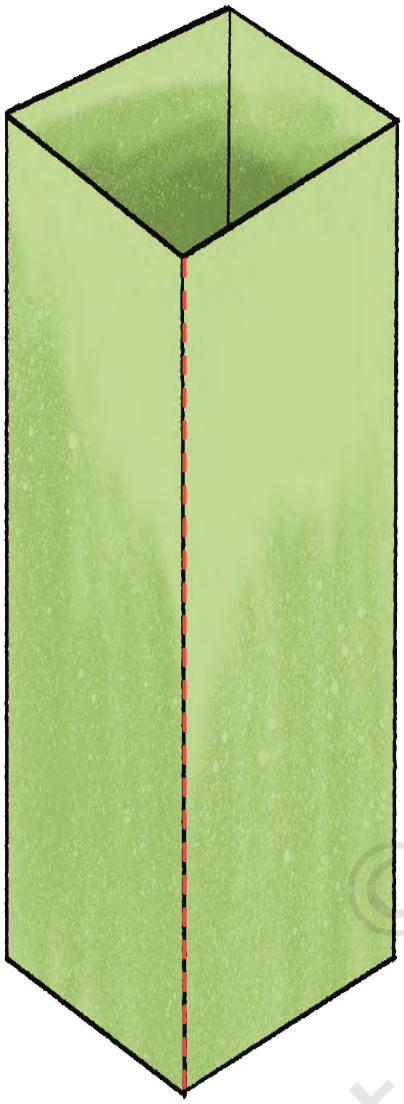
Let Us Do

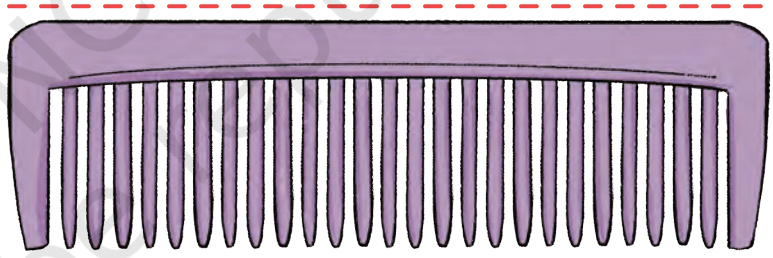
1. Measure each object using a scale.



_____ cm

_____ cm

_____ cm



_____ cm

Write the names of the objects in increasing order of length.

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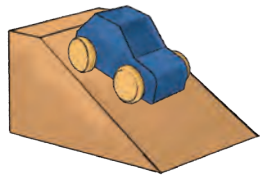
2. Estimate the lengths of the following and compare your responses with your friends, in the grade. Write some examples of things that can be lesser than or equal to 1 cm in length. Verify by measuring.

Length of items	Equal to 1 cm	More than 1 cm	Less than 1 cm	Actual measurement
A fingernail				
An eraser				
An ant				
A grain of wheat				
A rajma seed				

3. Take three toy cars and find out how far each one can go. You can use a small wooden ramp, or you might like to make a ramp using any material that you have.



Measure the distance each of your cars travels using measuring tape and write the answers in cm.

Car	Distance from the ramp	Rank
Car 1	_____ cm	
Car 2	_____ cm	
Car 3	_____ cm	

Note for Teachers: Get a one metre measuring scale or measuring tape for the students to observe. Make students observe the marks and the numbers written on the tape. Discuss what 100 denotes on the tape. Students often assume it is the number of marks on the tape. Highlight that the distance between two marks is one centimetre (1 cm) and one metre is divided into 100 such 1 cm distances. After students have made such observations, children can use the measuring tape/scale to measure small lengths.

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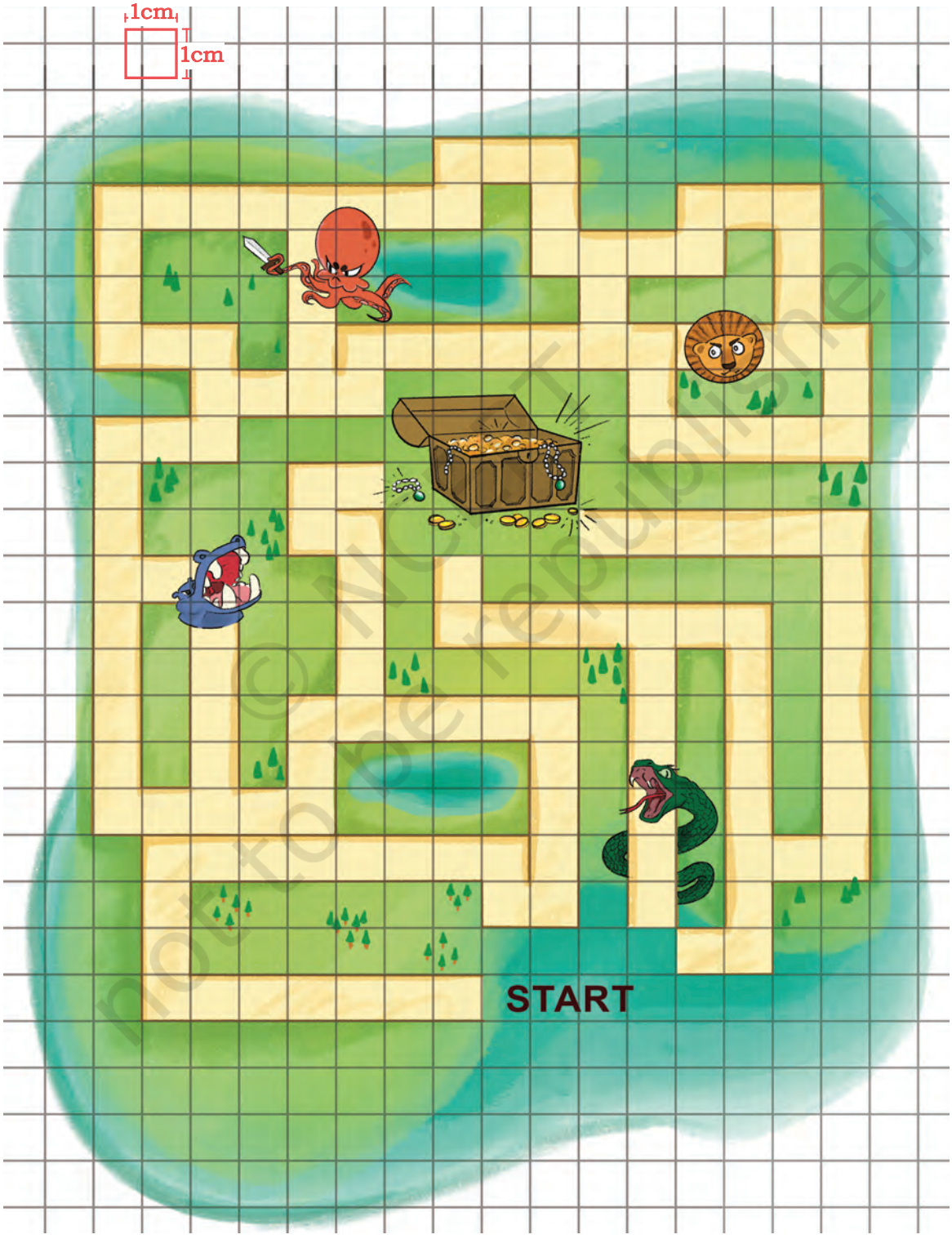
4. Find the longest and the shortest route in this treasure hunt. You can go around the obstacles but cannot jump over them. You can only walk on the yellow tiles and not on the grass. Can you find the length of your route in centimetres? Look for the 1 cm clue in the map.



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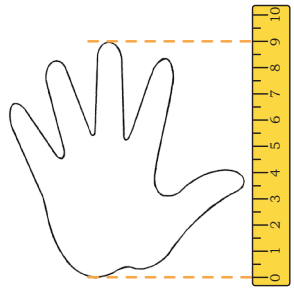
5. Trace your hand on a piece of paper. Measure it using the scale.

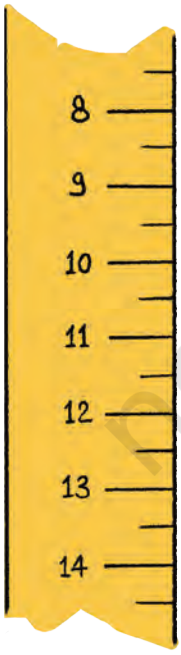


Length of my hand = _____ cm

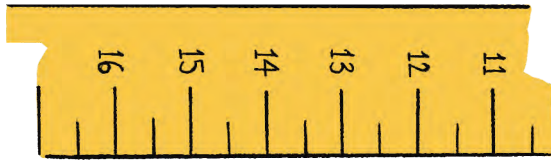
6. Use your hand to estimate the measurement of any object. Convert into centimetres. Verify using the scale.

Object	Number of hands	Estimate using hand	Actual measure using the cm scale
1. Length of my textbook		_____ cm	_____ cm
2. Height of my chair		_____ cm	_____ cm
3. Width of my desk		_____ cm	_____ cm
4. Height of a flowerpot		_____ cm	_____ cm

7. Ashwin's scale is broken. Can you help him to measure using this scale?



_____ cm



_____ cm

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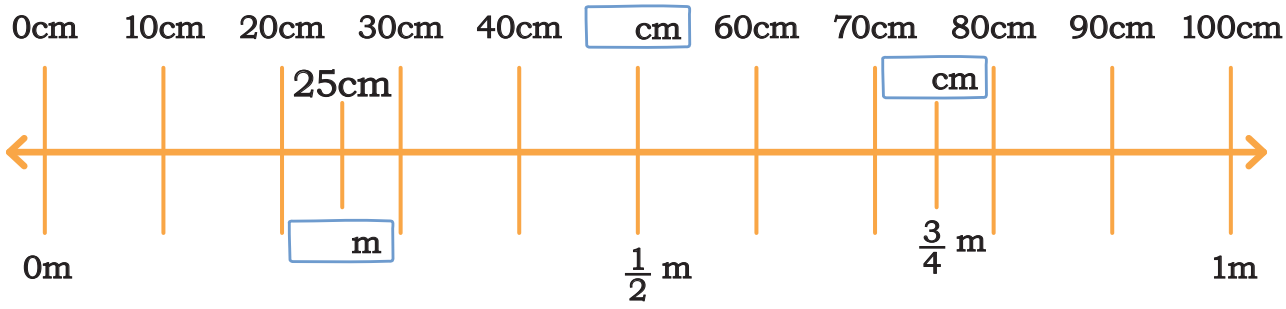
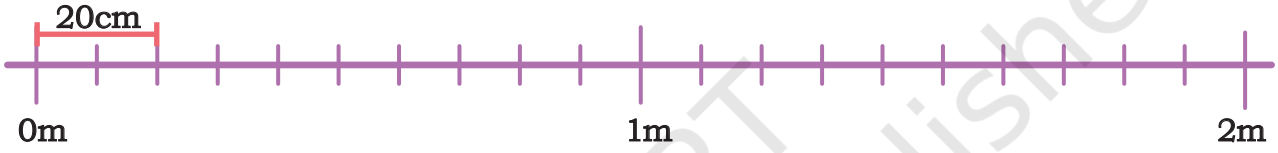
8. Fill the blanks on the number line below appropriately.



9. The length of a board is 2 metres. Sonu has a decorative border sticker which is 20 cm long. How many such stickers are needed to cover the length of the board completely?



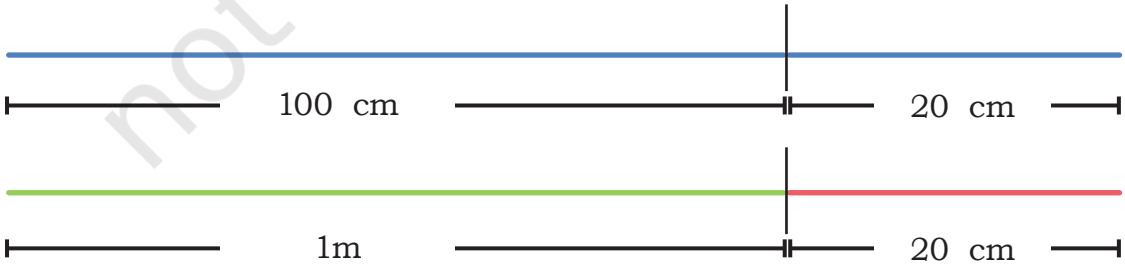
Metre and Centimetres

Ramu and Shamu are using a measuring tape to measure their own height.

Ramu reads his height from the tape as 120 cm and Shamu reads it as 1 m 20 cm.

Who is correct?

Pinki says both are correct and draws this.



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Let Us Do

1. The Village Sarpanch got the depth of some wells in his village measured by two different people.

   a) Fill the blanks such that the depths are the same.

   i) 2 m = 200 cm

   ii) _ m = 400 cm

   iii) 6 m = ____cm

   iv) _ m = 800m

   b) Identify the wells with the same depth and match them.

1 m 40 cm	550 cm
4 m 60 cm	140 cm
2 m 30 cm	460 cm
5 m 50 cm	230 cm

Let Us Explore

Activity: Students will measure their height using a measuring tape. Make a table in your notebook and complete it.

Name of the Student	Height in cm	Height in m

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Answer the following questions.

1. Height of the tallest child is _____.

2. Height of the shortest child is _____.

3. Number of children who are more than 1 m tall _____.

4. Number of children who are shorter than 1 m _____.

Fencing and Lacing

The length of the boundary of an object or shape is called perimeter.

Bhola is making a boundary with bricks for his vegetable garden. Colour the bricks on the boundary. How many bricks will he need to make the boundary?

Note for Teachers: Help children understand that perimeter is the length of the boundary of a closed figure that can be measured using various non-formal units, such as footsteps, thumbprints, and block printing. Such measures are generally approximate but measuring using formal units with a scale or measuring tape would be more accurate.

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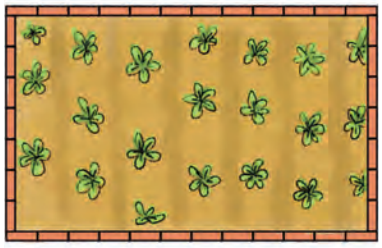
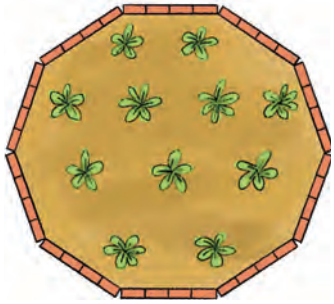
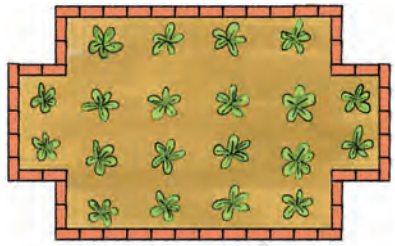
Let Us Do

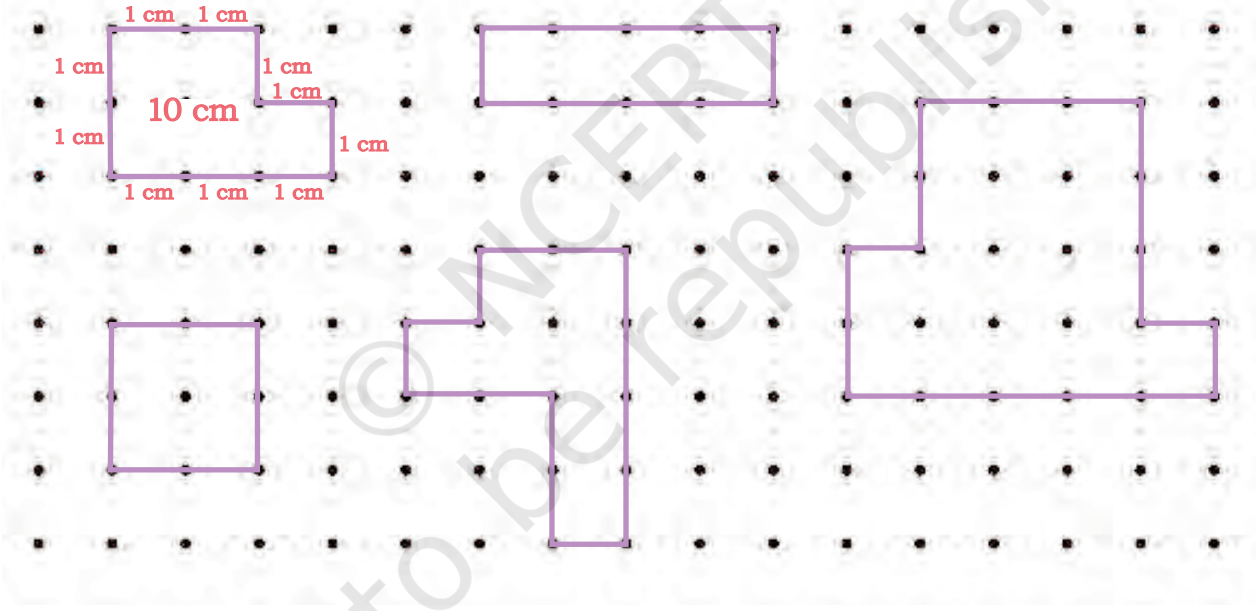
1. Bhola made the boundary of his gardens in the following ways. Circle the boundary that is longest.







2. Let us find the perimeter of some shapes using the dot grid. One is done for you.



a) Colour the boundary with the longest length in blue.

b) Colour the boundary with the shortest length in green.

c) Tick the shapes with the same length.

Note for Teachers: Help children see the perimeter as length or distance around a shape. Let them understand how dot grids of 1 cm help measure perimeter.

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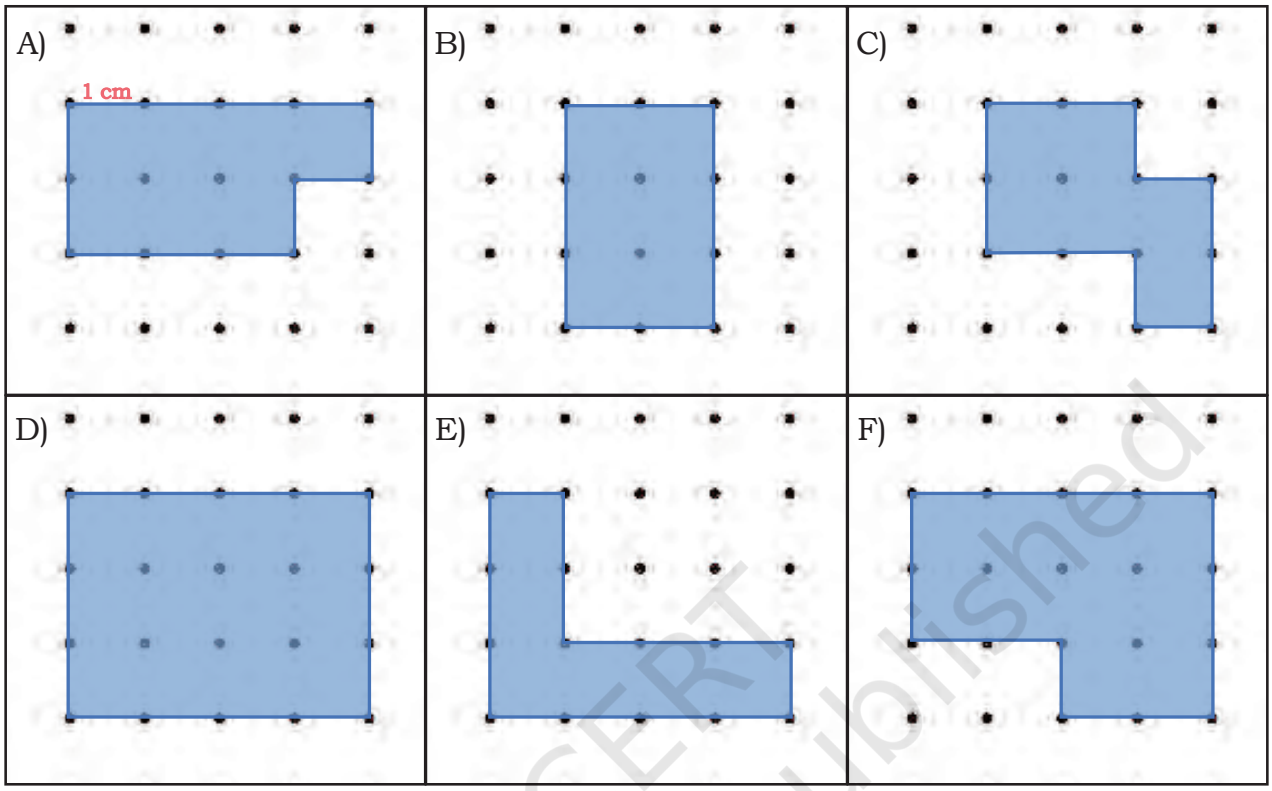
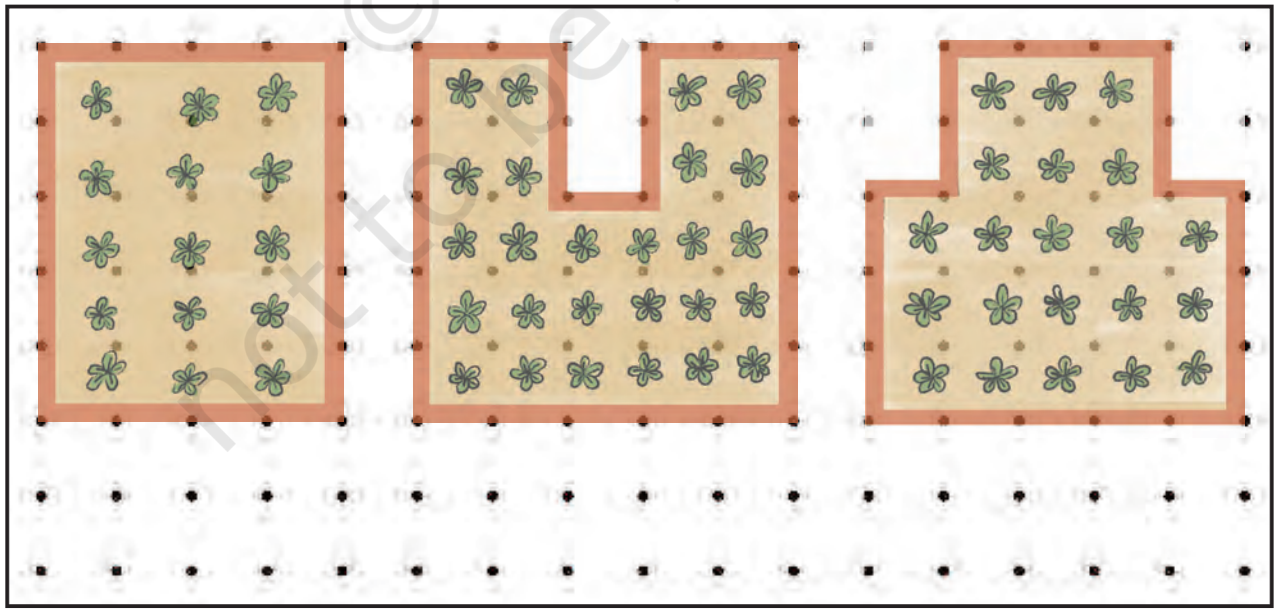
3. Do any of the following shapes have the same perimeter? Tick them.



4. Tick the garden with the minimum perimeter.



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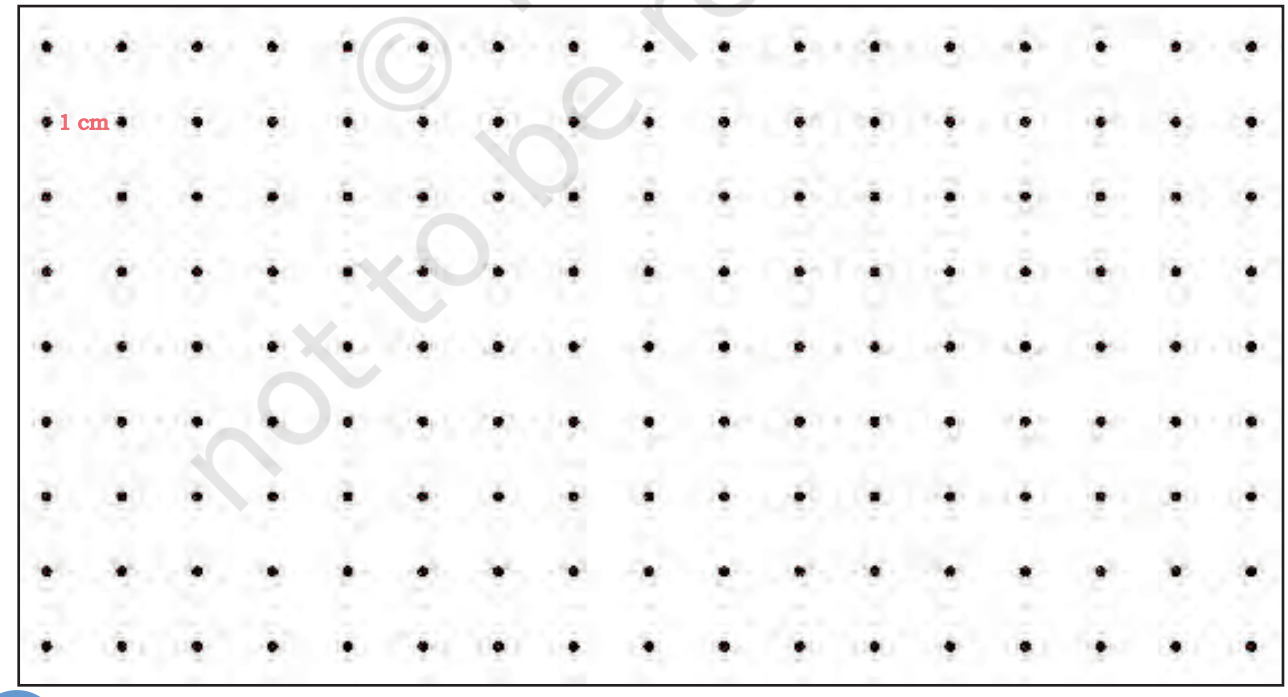
5. Estimate and measure the perimeters of shapes around you using a scale and write them in the space given below.

S. No.	Object	Estimated perimeter in cm/m	Actual measure in cm/m
1.	Desk		
2.	Blackboard		
3.	Classroom floor		
4.			
5.			
6.			

6. Draw three different shapes with perimeter of 20 cm.



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Chapter 7

The Cleanest Village

0433CH07

My School Trip

Daisy and Lou study in Grade 4 in Shillong, Meghalaya. The school has circulated the following poster for a field trip.

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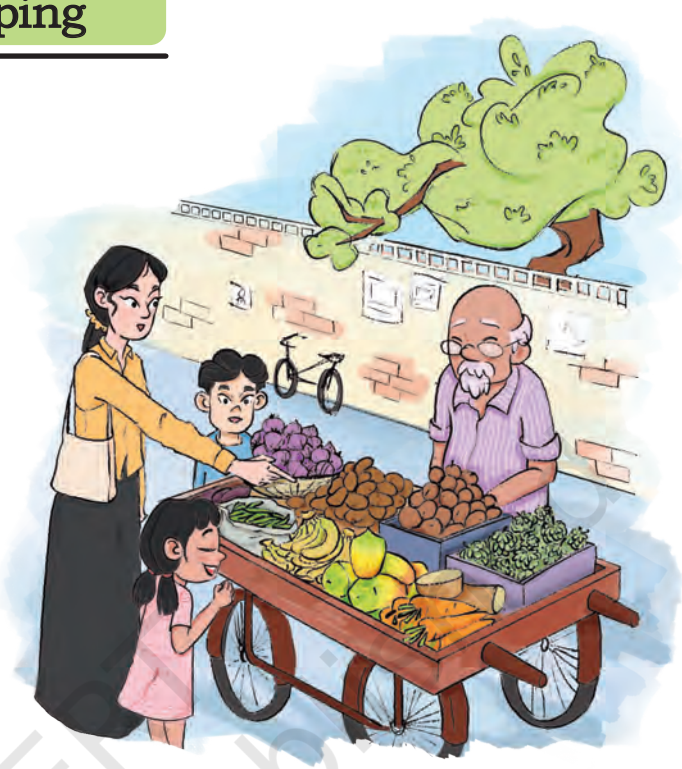
Daisy and Lou Go Shopping



Daisy and Lou are very excited about their trip. They join their mother in the weekly shopping as they need to buy things for their trip. The family makes a list of things to buy:

- Fruits and vegetables
- Field Trip Items-Biscuits, Water Bottles, and Dry Fruits.

Sapan Dada has a cart for selling vegetables and fruits. The prices of the vegetables and fruits are given below.

	Cost for 1 kg
Custard apple:	₹45
Beans:	₹95
Radish:	₹23
Onion:	₹32
Potato:	₹37
Yam:	₹45
Sapota:	₹70
Papaya:	₹65
Banana:	₹55

Sapan Dada asks Daisy and Lou to find the costs of different quantities of fruits and vegetables. Help them to complete the tasks. You may use a number line, play money or any other method to calculate.

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2 kg of beans

_____

1 kg of custard apple and 1 kg of sapota

_____

1 kg of onion and 1 kg of potato

_____

1 kg of radish and 1 kg of yam

_____

2 kg of radish and 2 kg of papaya

_____

2 kg of onion and 2 kg of potato

_____

What do you notice about these two costs?

Their mother buys things for ₹ 163. What might she have bought? There is more than one possibility.

_____

_____

₹ 163

Udaya Didi runs a store selling rice, atta, daal, and spices. Daisy and Lou help Udaya Didi return the balance to customers while their mother buys the groceries. Udaya Didi also asks them some tricky questions.

Help them find the missing numbers in each of the following. Use a number line, play money or any other way to find the balances.

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Cost -	₹113
Paid -	₹150
Balance -	₹37

Cost -	₹185
Paid -	₹200
Balance -	

Cost -	
Paid -	₹200
Balance -	0

Cost -	₹435
Paid -	₹500
Balance -	

Cost -	₹149
Paid -	₹500
Balance -	

Cost -	₹46
Paid -	
Balance -	

Cost -	
Paid -	₹200
Balance -	₹75

Cost -	₹580
Paid -	
Balance -	₹120

Cost -	
Paid -	
Balance -	

Lou and Daisy buy 3 kg bananas to eat on the way with their friends. Which of the following options can they use to buy the bananas?

(a)

(b)

(c)

(d)

(e)

Note for Teachers: Encourage students to share their approaches and discuss them with the grade . Guide them to use flexible approaches to solve above problems.

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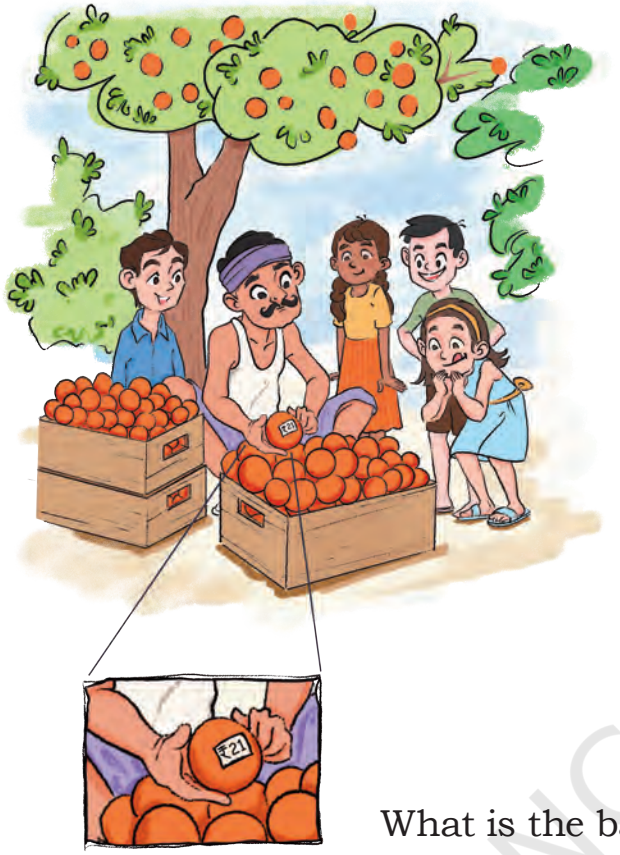
A Strange Puzzle!



Four naughty kids on a walk
come across a fresh orange crop.
They ask the farmer the price of one.
The farmer says, "Each costs ₹21".

Two oranges each they buy.
The farmer gives them with a sigh.
They all reach in to their jackets,
To take out notes from their pockets.

Each one pays a different note,
Krishna a ₹50 and Sudama a ₹100
Mala a ₹200 and Neela a ₹500.

What is the balance that they each got?

Krishna

Paid: ₹ _____

Balance: ₹ _____

Sudama

Paid: ₹ _____

Balance: ₹ _____

Mala

Paid: ₹_____

Balance: ₹_____

Neela

Paid: ₹_____

Balance: ₹_____

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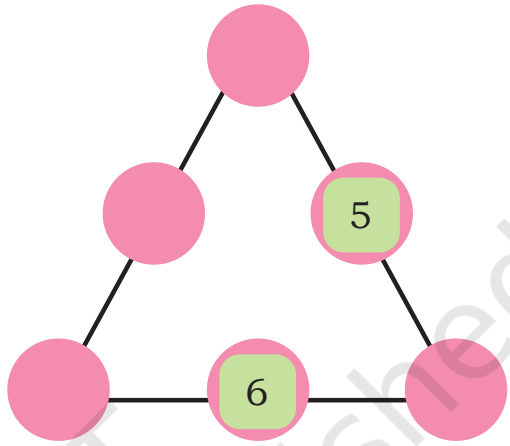
Let Us Play

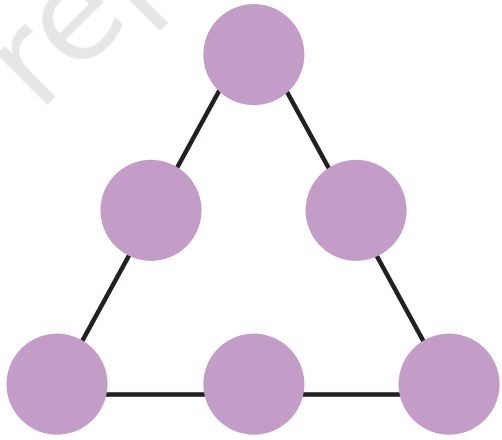
Place the numbers 1–6 in the blanks in such a way that the sum on each side of the triangle is 9. No numbers should be repeated.

1 2 3 4



Use the same numbers 1–6 and make the sum 10 on each side of the triangle.

1 2 3
4 5 6



What other sums can you make with these 6 numbers?

Can you make 12 on each side? Can you make 13?

What strategy did you use to place the numbers?

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Add Up

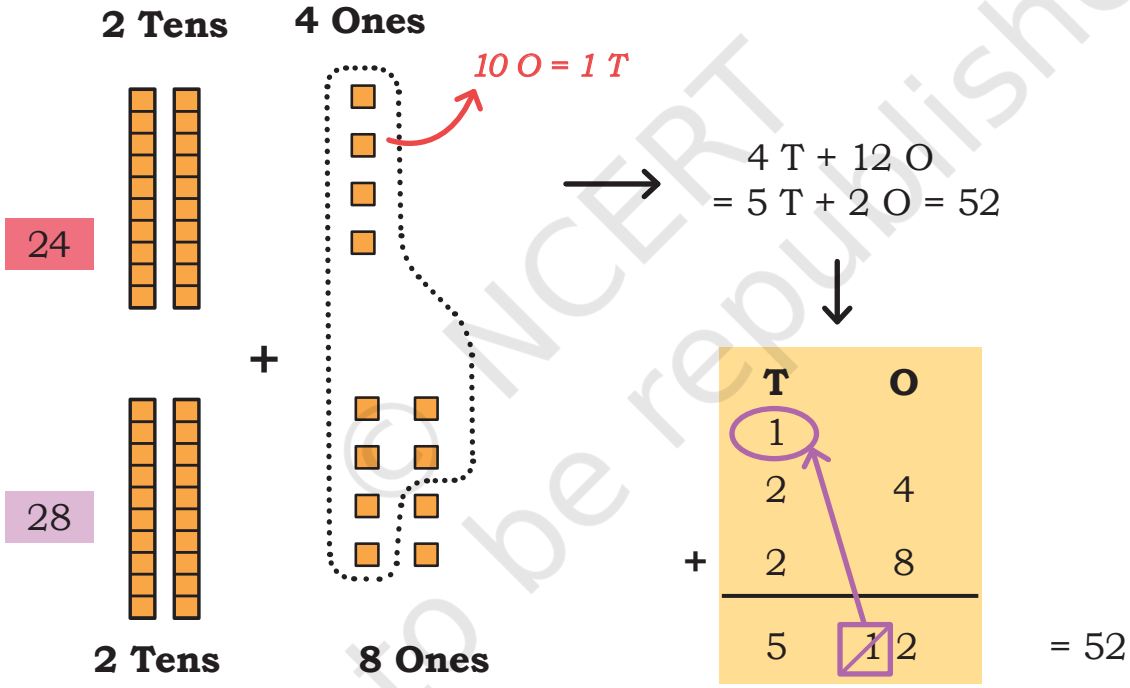
Daisy and Lou leave for the field trip by a bus the next morning. 24 teachers and 438 children are going from their school. 476 children from a neighbourhood school along with 28 teachers are also going to the same village.

Estimate the number of teachers going.

_____

How many teachers are accompanying the children?

24 + 28



There are 52 teachers accompanying the children.

Note for Teachers: It is not enough to rely on key words like 'left', 'total', 'more', 'less' for solving word problems. Instead, we suggest that teachers get children to draw pictures for what they understand from the question. Some suggestions for the types of word problems and their pictures are given at the end of the book.

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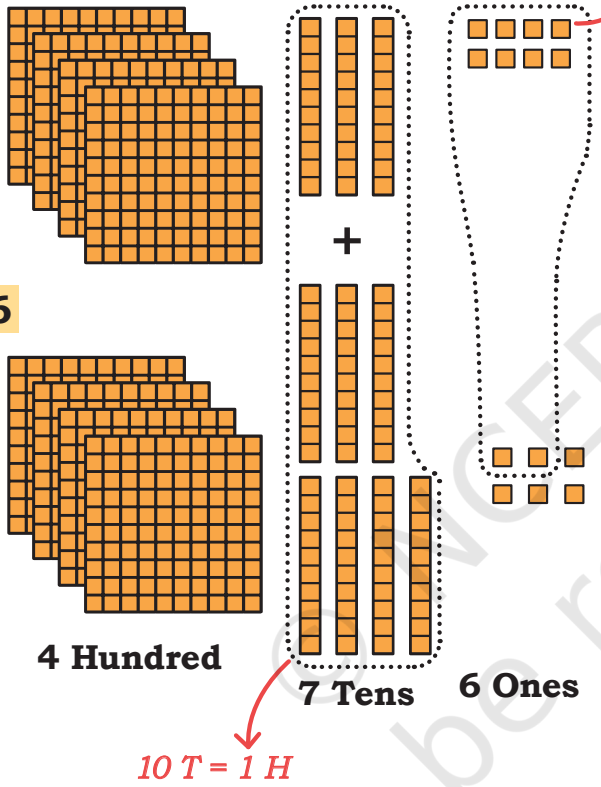
How many children are going on the trip?

438 + 476

Estimate the number of children going on the trip.

438



8 H + 10 T + 14 O

= 9 H + 1 T + 4 O

= 914

	H	T	O
	1	1	
	4	3	8
+	4	7	6
	9	1 1	1 4
	9	1	4

914 children are going to Mawlynnong.

Note for Teachers: Support learners in making the transition from concrete materials to the more abstract algorithm. It will be good for the children to see the connection between the steps shown here. Show every time that 10 Ones are regrouped to 1 Ten, 10 Tens are regrouped to 1 Hundred, 10 Hundreds to 1 Thousand. Use the word regrouping instead of "carrying". Encourage them to check solutions using a number line or skip count as done in the previous grade . Work on operations with 2-digits till children are comfortable with regrouping.

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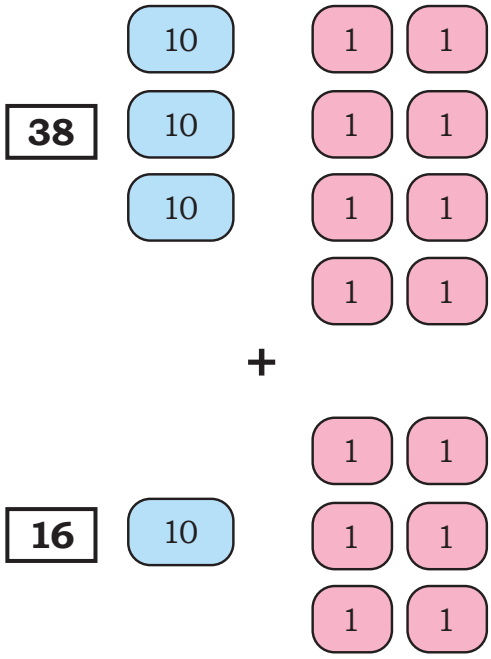
Daisy and Lou ate one large piece of *pusaw* for ₹38. They liked it a lot and bought another small piece for ₹16. How much did they spend on *pusaw*?

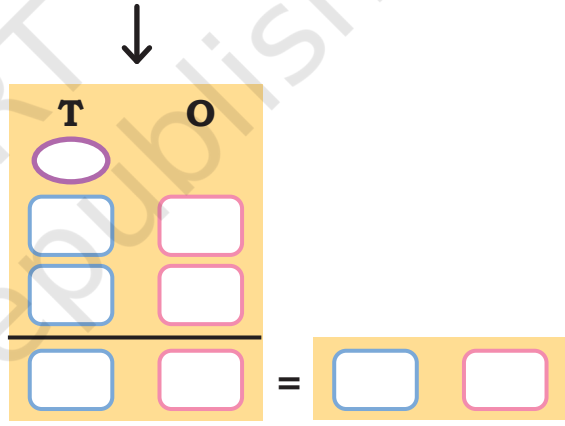
Estimate the money they spent.

_____

38 + 16

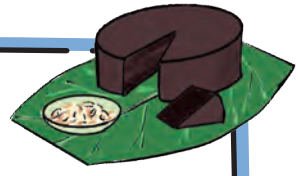


→ = _____T + _____O



They spent ₹_____

Write the final answer after regrouping in the boxes above.



Pusaw is a traditional Khasi snack from the Northeast region of India. It is made from a special variety of red rice, grown in the hills and paddy fields of Khasi Hills. The village of Mawranglang is famous for its *Pusaw*.

Note for Teachers: Children can be slowly encouraged to use tokens, instead of Dienes Blocks. Bring to their notice the similarity in steps.

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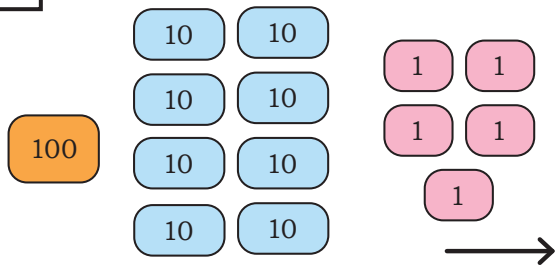
Daisy and Lou had collected ₹185 in their piggy bank. Their mother gave them ₹125 more for the trip. How much money did they take for the trip?

Estimate the money they took for the trip.

_____

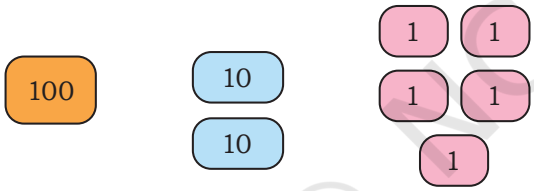
185 + 125

185



+

125



_____H + _____T + _____ O

= _____H + _____T + _____ O

Daisy and Lou took ₹_____ for the trip.

	H	T	O
	⬭	⬭	
	▢	▢	▢
+	▢	▢	▢
	▢	▢	▢
=	▢	▢	▢

Write the final answer after regrouping in the boxes above.

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Let Us Do

1. In *Kalakshitij*, a school of performing arts, the following number of students are learning to sing and play the tabla. Estimate and then find the total number of students.

	Tabla players	Singers	Total
Boys	78	532	_____ boys
Girls	95	346	_____ girls
Total	_____ tabla players	_____ singers	

15 more girls join the music school and they want to learn to play the tabla. How many girls play the tabla now?

2. Add by aligning the numbers in columns in your notebook.

a) 32 + 47 (b) 654 + 95 (c) 286 + 123

b) 476 + 324 (e) 700 + 289 (f) 534 + 483

3. Preeti's school has 423 children. Her school has 178 children less than her cousin's school. How many children study in Preeti's cousin's school?

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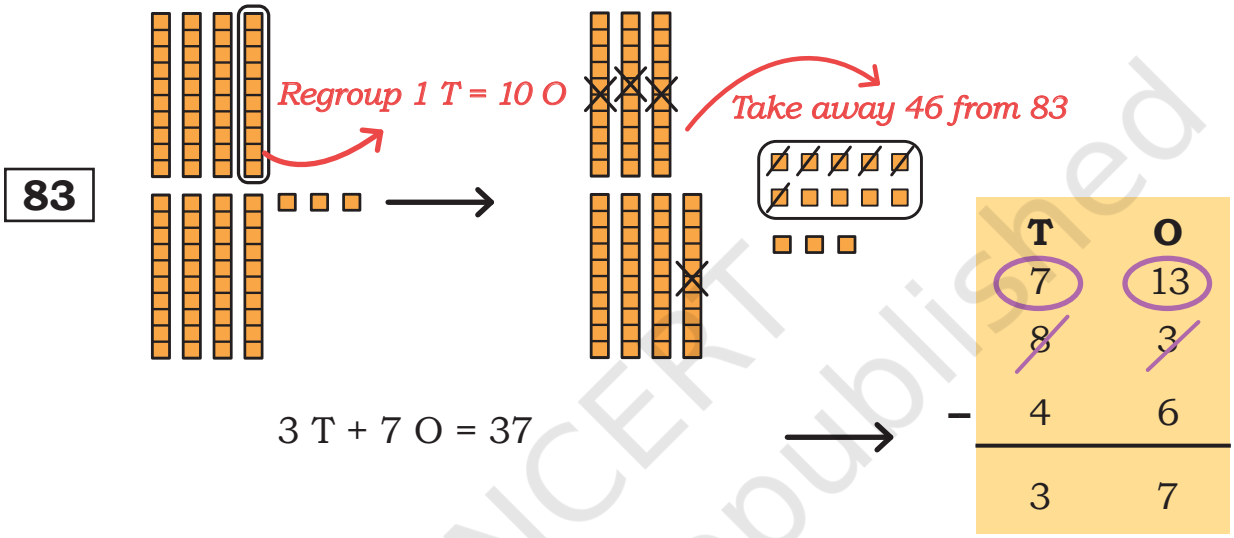
Subtract It

Estimate the difference

The buses stopped for a snack on the way. 83 children bought *Pusaw*. 46 children bought fruit plates. How many more children bought *Pusaw*?

The diference between the children who bought *pusaw* and those who bought fruit plates is 83–46.

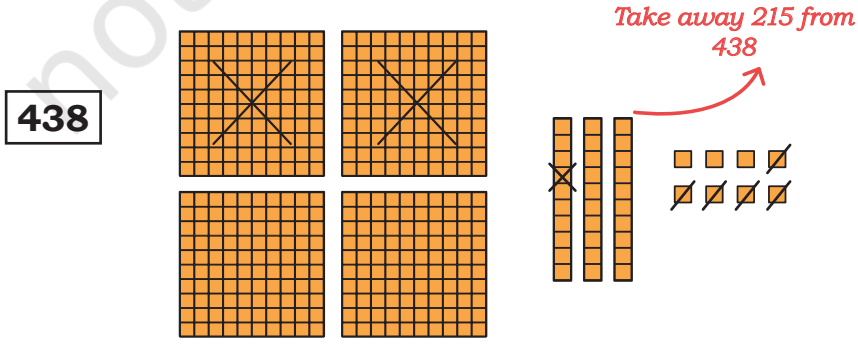


37 more children bought *Pusaw* than fruit plate.

Estimate the number of children who are waiting.

All 438 decide to visit the famous Living Roots Bridge in Mawlynnong village. First, 215 children go to see the Living Roots Bridge. How many children are waiting to visit the Living Roots Bridge?

The number of children who are waiting = 438–215.



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2 H + 2 T + 3 O = 223 ⟶

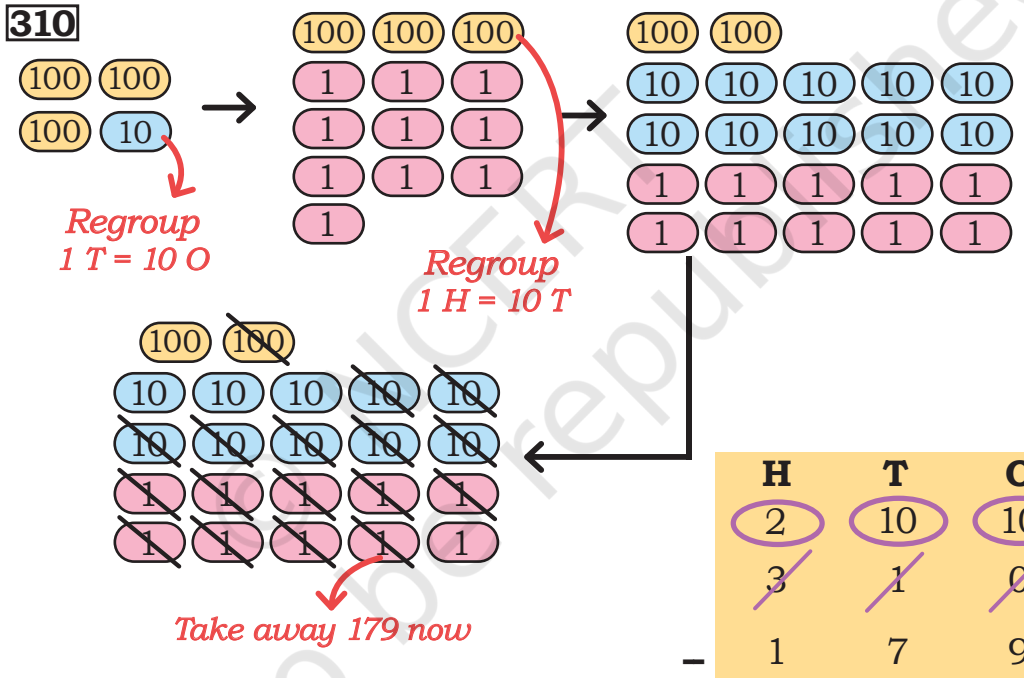
223 children are waiting.

	H	T	O
	4	3	8
−	2	1	5
	2	2	3

Lou and Daisy brought ₹310 in all. After spending on food and some gifts, they are left with ₹179. How much money have they spent till now?

Estimate the answer.

Rupees spent = 310–179.



1 H + 3 T + 1 O = 131 ⟶

	H	T	O
	2	10	10
	3	1	0
−	1	7	9
	1	3	1

So, they have spent ₹131.

Note for Teachers: Learners can use the concrete materials first before doing the algorithm. You should communicate that while computing using an algorithm we start from the ones place and then move to tens, hundreds and so on. When there are not enough ones to take away, then we need to regroup the 1 Ten to 10 Ones. Similarly, when there are not enough tens to take away, we regroup 1 Hundred to 10 Tens.

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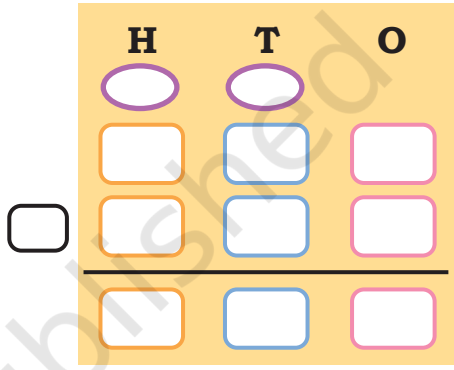
Let Us Solve

Ram Chacha got 264 mangoes from his mango tree last year. This year he got 527 mangoes. How many more mangoes did he get this year?

Estimate the answer.

_____

Use/draw tokens for the above problem, if needed.



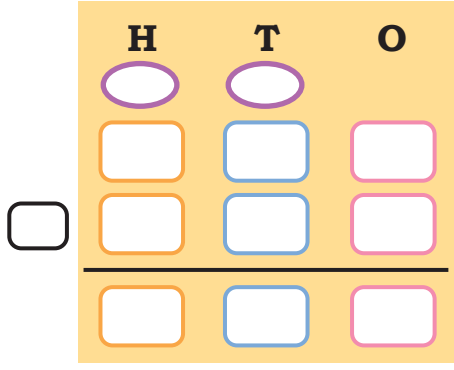
4. During the festival of dolls (*Gombe Habba* in Dussehra), Ranganna made 639 dolls. He was able to sell 531 dolls. How many dolls are left with him?

Estimate the answer.

_____

No. of dolls left = _____

Use/draw tokens for the above problem, if needed.



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5. Subtract by aligning the numbers in columns in your notebook.

a) 83 – 29

b) 345 – 123

c) 763 – 437

d) 803 – 350

e) 900 – 328

Let Us Solve

1. These books are in the community library of Wakanda village. Children borrow these books to read during their vacation.

Name of the book	Pages in the book
Swami and Friends	179
Panchantantra Tales	236
Karadi Tales	30
Akbar Birbal	96
Blue Umbrella	90
Adventures of Feluda	128

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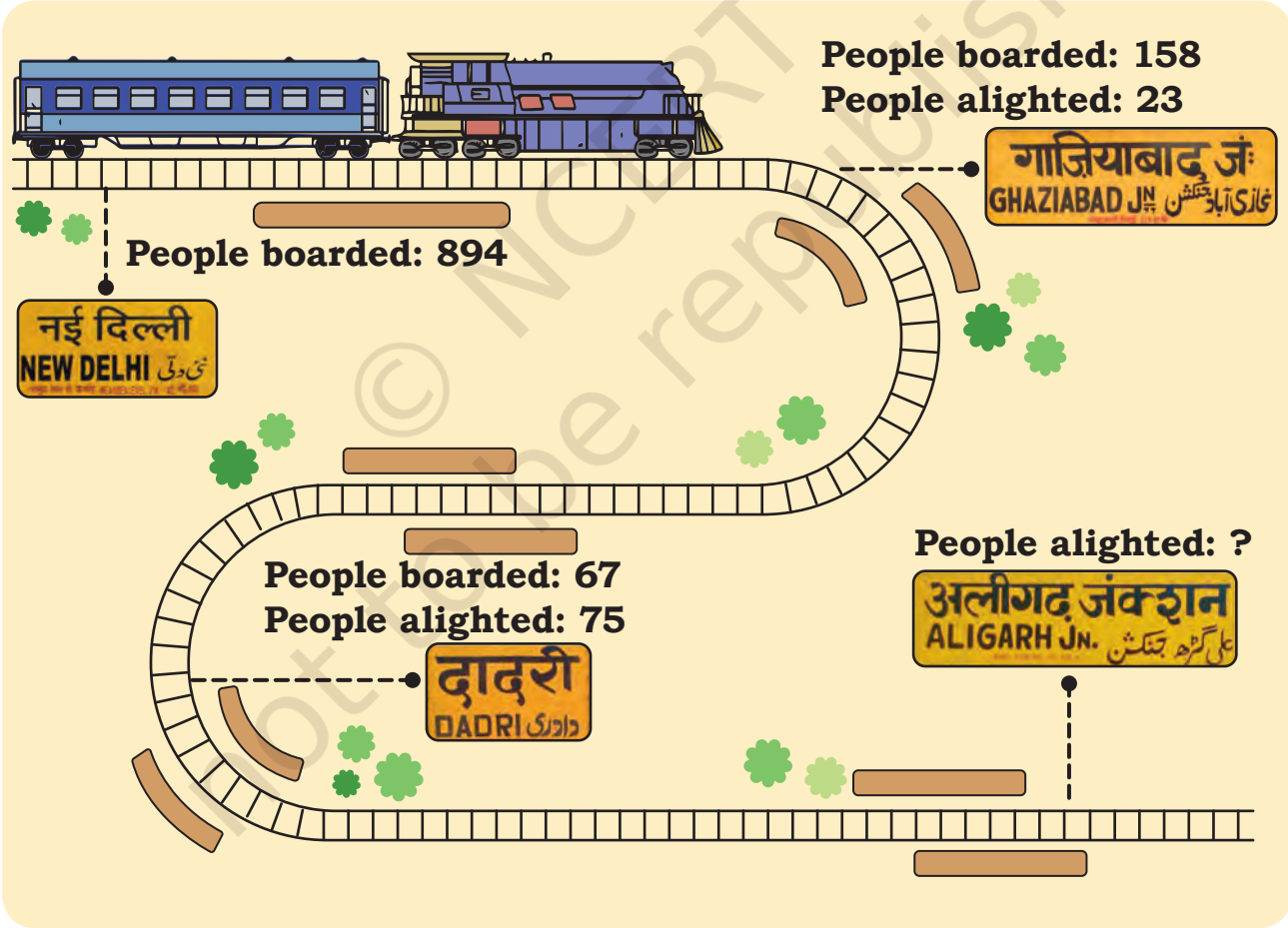
a) Rami read *Panchatantra Tales* during the summer vacation. Kesu read *Akbar Birbal*, *Karadi Tales* and *Blue Umbrella*. Who do you think read more? How many more pages?

b) Sumi has read 23 pages of *Adventures of Feluda*. How many more pages are left to complete the book?

c) Jaggu decides to read all the books listed here during his vacation. He has finished reading *Swami and Friends*, *Akbar Birbal* and 50 pages of *Feluda* in 4 weeks. How many more pages does he have to read to finish reading all the books?

2. A daily train between Delhi and Aligarh travels a distance of 131 km. Look at the picture below and answer the questions that follow.



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a) How many passengers are there on the train when it leaves Dadri?

_____

b) Find the number of people who got off the train at Aligarh.

_____

c) Were there more people on the train in New Delhi or in Aligarh?
How much more/less? _____

d) How many people travelled altogether by the train?

_____

Let Us Solve

a.

	H	T	O
	4	5	2
+		8	9

b.

	H	T	O
	6	4	1
–	2	7	3

c. Find quick ways of solving. Think about some of the strategies you learnt in Grade 3.

326 + 25 = _____

675 + 5 = _____

410 – 12 = _____

204 – 10 = _____

I can think about it like this: 410–10 is 400 and 2 less than 400 is 398.

811 + 99 = _____

945 – 19 = _____

d. Solve by aligning the numbers in columns in your notebook.

1. 38 + 943
2. 465 + 305
3. 435 + 462
4. 764 – 657
5. 518 – 209
6. 879 – 53

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e. Find two numbers such that their sum is 856. Find another two numbers such that their difference is 563. Make your own word problems with these numbers.

856 = ☐ + ☐

_____

_____

_____

563 = ☐ – ☐

_____

_____

_____

Number Pair Hunt

Here is a grid of numbers. There are many number pairs in this grid. A number pair has 2 numbers which are next to each other, vertically or horizontally. For example, the numbers 111 and 185 are number pairs 48 and 185 are number pairs in this grid.

Should we check every number pair to find out which is the largest sum or difference?

35	100	179	68
111	185	143	54
300	48	225	190
54	321	63	167

How many number pairs are there in this grid?

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1. Find the number pair whose sum is the greatest.

_____

2. Find the number pair whose sum is the smallest.

_____

3. Find the number pair whose difference is the greatest.

_____

4. Find the number pair whose difference is the smallest.

_____

The Missing Digits

Fill the missing digits below to make each of the following sums correct.

☐ 6	1 ☐	3 ☐ 2
+ 1 ☐	+ 2 ☐	+ ☐ 8 8
5 0	3 8	8 9 0
7 ☐	6 5	4 7 ☐
− 4 ☐	− ☐ ☐	− 1 4 ☐
2 7	2 5	☐ 2 7

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Let Us Do

1. Add.

a) 23 + 489

b) 105 + 295

c) 630 + 56

d) 35 + 99

e) 409 + 387

f) 67 + 76

g) 580 + 207

h) 333 + 666

i) 826 + 268

2. Subtract.

a) 300 – 45

b) 962 – 268

c) 706 – 209

d) 842 – 387

e) 674 – 76

f) 754 – 409

g) 403 – 245

h) 600 – 384

i) 546 – 538

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Chapter 8

Weigh It, Pour It

0433CH08

In Grade 3, we learnt about measuring weight and capacity. Do you remember the 1 kilogram salt packet and 1 litre bottle? Let us learn some more about measuring weight and capacity.

1. Look at the pictures given and write the names of the animals from heaviest to lightest.

   _____

2. Write the name of the heaviest object in your home. How did you know?

   _____

3. Do you carry your school bag with ease or with some effort?

   _____

4. Write the name of the heaviest book in your bag. How did you know?

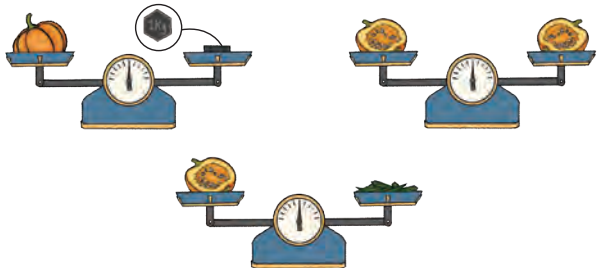
   _____

5. What is your weight? How did you know?

   _____

Fun at Vegetable Market!

Rita and Shabnam went to the market to buy some fruits and vegetables. They saw the vegetable seller weighing vegetables.



What do you think will be the weight of the half pumpkin? _____

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Let Us Do

Estimate the weight of the following and put a tick mark (✓) in the appropriate cell. Try to verify if your guess is correct by using a weighing balance.

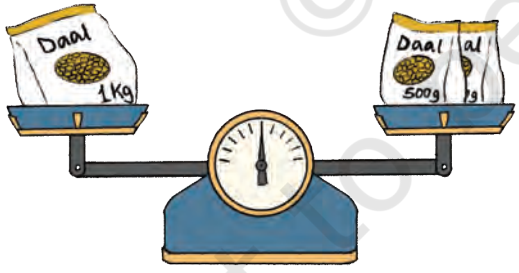
Fruits and vegetables	Estimation		Actual weight	
	Less than 1 kg	More than 1 kg	Less than 1 kg	More than 1 kg
6 Bananas				
5 Potatoes				
10 Tomatoes				
15 Onions				

Let Us Explore

We often write kg for kilogram and g for gram

1. Look at the pictures. You may also try doing the same.

a.



2 packets of 500 grams = 1000 g = 1 kg

So, 1 packet of 500 g = $\frac{1}{2}$ kg

Or 500 g = $\frac{1}{2}$ kg

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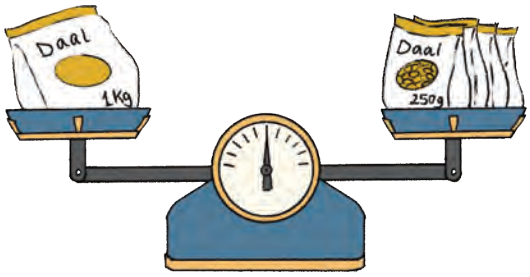
b.

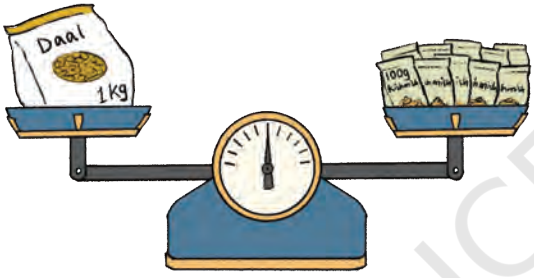


4 packets of 250 grams = 1000 g = 1 kg

So, 1 packet of 250 g = $\frac{1}{4}$ kg

Or 250 g = $\frac{1}{4}$ kg

c.



10 packets of 100 grams

= 1000 g = 1 kg

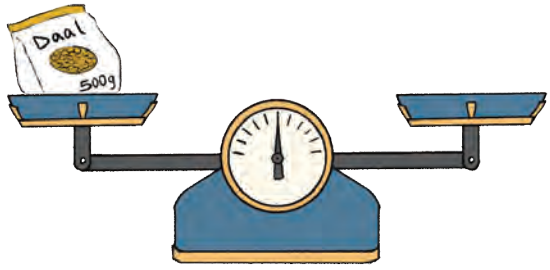
Let Us Find

1. How many 250 g daal packets will balance one 500 g daal packet?

Draw as many packets of 250 g on the empty pan such that it balances the 500 g packet shown on the left pan of the balance.

What did you find?

250 g = _____ of 500 g ($\frac{1}{2}$, 2)



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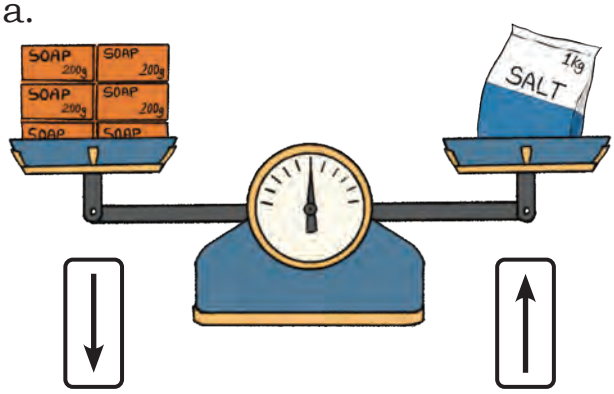
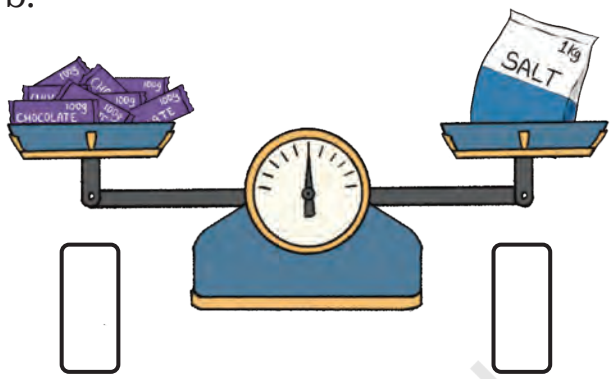
2. Draw arrows to indicate which side the pan balance will tilt? One is shown for you.

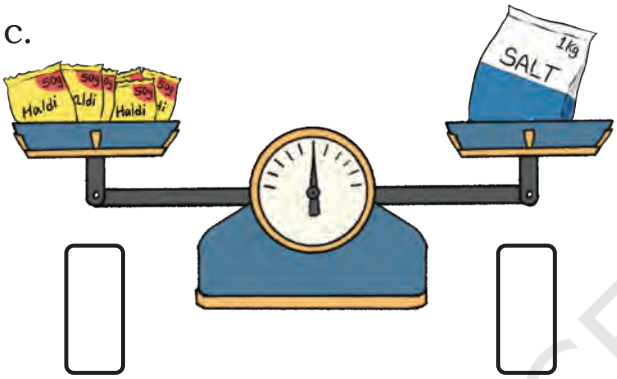
a.



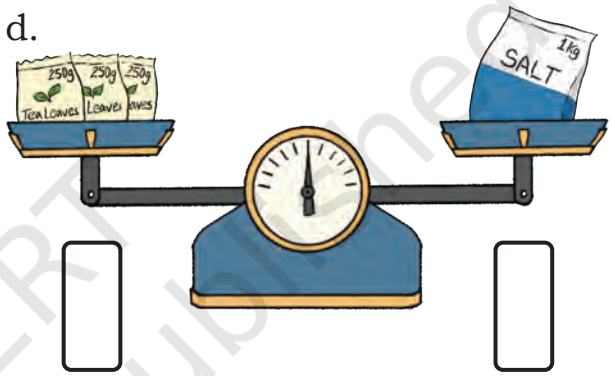
b.



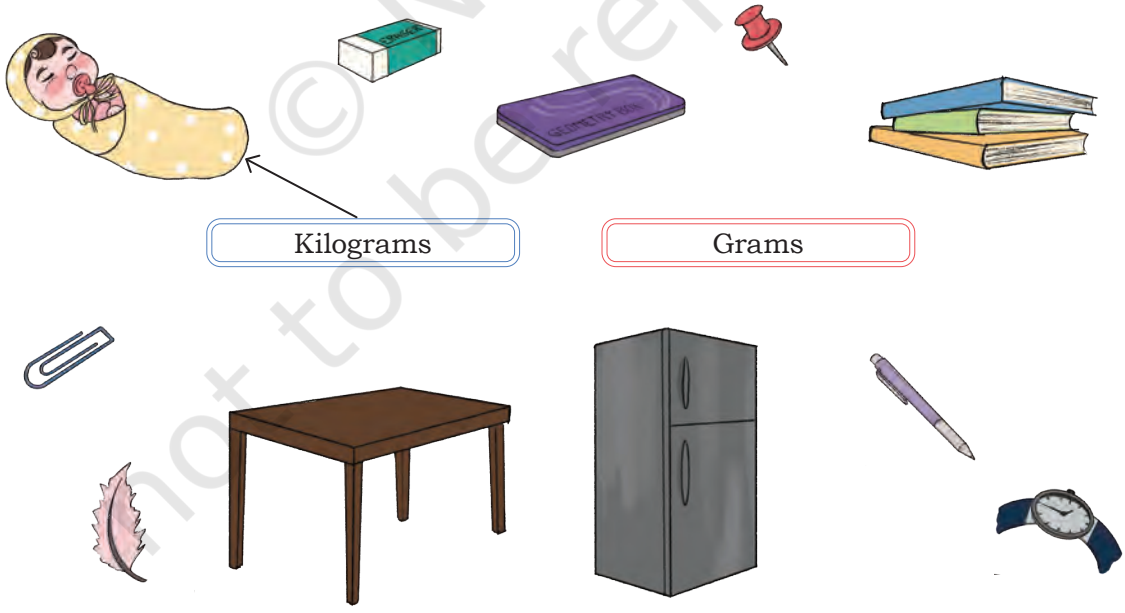
c.



d.



3. Match the unit convenient for measuring each of the following objects?



Kilograms

Grams

Note for Teachers: You could try to organise a weighing balance in grade and weights like 100 g, 500 g, 1 kg. You could also ask children to do this task at home or in their neighbourhoods.

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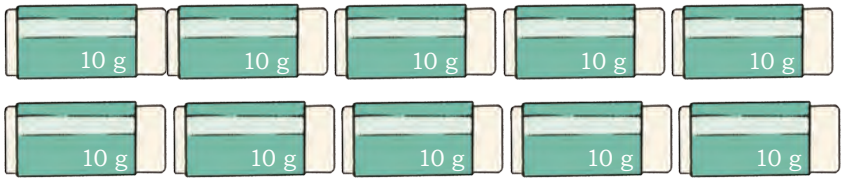
Let Us Do



1. How many erasers will weigh the same as a 50 g *Haldi* packet?_____
2. A 100 g soap bar will weigh the same as _____ erasers.
3. _____ erasers will weigh the same as 250 g sugar.

Let Us Think

Boxes of Sweet

Mr Shrinathan, a sweet shop owner has several orders for 1 kg *Kaju-katli* but he has to pack them in different sized boxes.

Write down the number of boxes needed to pack 1 kg *Kaju-katli* in the blank space:

1. Mr Das wants the sweets in boxes weighing 500 g each. _____
2. Mrs Fernandes wants the sweets in boxes weighing 250 g each. _____
3. Mrs Khan wants the sweets in boxes weighing 100 g each. _____
4. Mr Patel wants the sweets in boxes weighing 50 g each. _____

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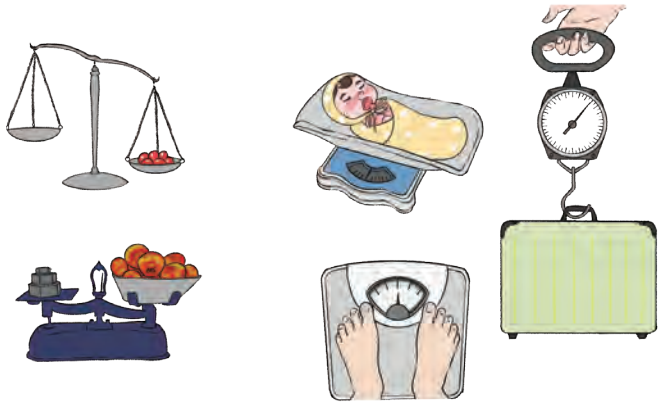
Weighing Machines

Do you know the different types of weighing machines used to weigh different objects?



Let Us Do

Ask your parents and find the amount of consumption of the following items at your home in a month.

Items	Weight
Atta	
Rice	
Pulses	
Sugar	

Taran and his sister are lifting packets of flour, rice, and salt.

What do you think they are experiencing while lifting these packets?

Have you ever lifted such packets at your home? What do you experience? Discuss.

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Let Us Do

1. Try to lift some objects around you and write the names of three objects that you can lift easily. Estimate and write their weights.

   1. _____ 2. _____ 3. _____

2. Now write the names of things that you can lift with a lot of effort. Estimate and write their weights.

   1. _____ 2. _____ 3. _____

3. How many 1 kg packets are in

   a. 10 kg : _____ c. 50 kg : _____

   b. 20 kg : _____ d. 25 kg : _____

4. Match the objects in the left column with their estimated weights in the right column.

A cat	1 g to 5 g
An elephant	150 kg to 300 kg
A 1 litre filled bottle	3 kg to 5 kg
A tiger	10 g to 15 g
An empty gas cylinder	6 kg to 10 kg
A pen	More than 1000 kg
A leaf	15 kg
A wooden chair	800 g to 1000 g

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Do You Know?

Mirabai Chanu is an Indian weightlifter. She won the silver medal at the 2020 Tokyo Olympics in the Women's 49 kg event. She lifted a total of 202 kg.

Measuring Capacity

Do you remember the 1 litre bottle? How much water does your water bottle hold?

Find bottles and containers that can hold the following quantities of water. Write their names in the appropriate columns in the table given below.

Less than 1 litre	1 litre	More than 1 litre

Take help from your teachers and parents to collect different bottles with different capacities—500 *ml*, 250 *ml*, 100 *ml*, 50 *ml*, and 10 *ml*.

We often write l for litre and ml for millilitre

Try to fill a one litre bottle with the water contained in different smaller bottles.

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Let Us Find

a) How many 500 *ml* bottles will fill a 1 *l* bottle?

500 ml + 500 ml = 1 l

1000 ml = 1 l

$$\textbf{500 ml} = \frac{1}{2}\ \textbf{l}$$

b) How many 250 *ml* bottles will fill a 1 *l* bottle?

250 ml + 250 ml + 250 ml + 250 ml = 1 l

1000 ml = 1 l

$$\textbf{250 ml} = \frac{1}{4}\ \textbf{l}$$

c) How many 100 *ml* bottles will fill a 1 *l* bottle?

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d) How many

250 *ml* in $\frac{1}{2}$ *l* = _____ 250 *ml* in 750 *ml* = _____

100 *ml* in $\frac{1}{2}$ *l* = _____ 100 *ml* in 800 *ml* = _____

Let Us Do

1. Find a dosing cup or a bottle of 10 *ml* and try to find how many 10 *ml* will fill a 100 *ml* bottle _____

Find how many

a) 10 *ml* dosing cups will fill a 250 *ml* glass? _____

b) 10 *ml* dosing cups will fill a 500 *ml* vessel? _____

c) 10 *ml* dosing cups will fill a 1 *l* bottle? _____

2. Take a 1 *ml* dropper and find out

a) How many 1 *ml* droppers will fill a 10 *ml* dosing cup? _____

b) How many droppers will fill a teaspoon? _____

3. Find out how much of these liquids are used at a time.

a) Eye drops Less than 1 *ml* at a time.

b) Honey _____

c) Cough Syrup _____

d) Cooking Oil _____

e) _____ _____

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4. Mr Krishna packages perfumed oils in different sized bottles. During a festival, the following customers asked for 1 *l* perfumed oils but in different sized bottles. Write the number of bottles each of them will get.

   a) Ms Shetty wants bottles of 500 *ml* each _____

   b) Mr Muthukumar wants bottles of 200 *ml* each _____

   c) Ms Naini wants bottles of 100 *ml* each _____

   d) Ms Kannan wants bottles of 50 *ml* each _____

5. Estimate and verify by measuring. Use the bottles you have collected for this purpose (for example, 500 *ml*, 250 *ml*, 100 *ml*, 50 *ml*, and 10 *ml*).

Container	Estimate	Actual capacity
Water bottle		
Glass		
Mug		
Jug		
Bucket		
Teaspoon		
Bowl		

Let Us Explore

Visit nearby shops and make a list of different items that are sold in the following quantities.

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50 *ml*	100 *ml*	200 *ml*	250 *ml*	500 *ml*	900 *ml*

Let Us Find

a) How many litres of water do you drink in a day? How did you find out?

_____

b) How much water can a crow drink at a time?

_____

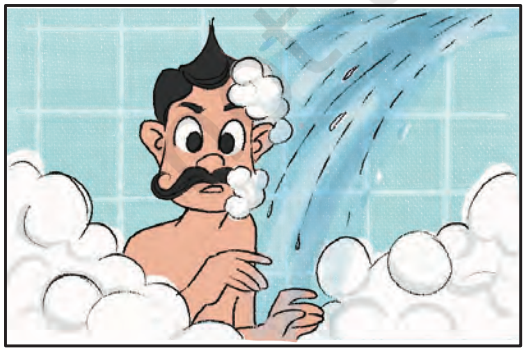
c) How much milk do you drink in one day?

_____

d) How much water does an elephant drink in a day?

_____

What do you use the most water for? What do you use the least water for? Compare this with a few others in your grade . In which activities is your water usage the same?



How much water may be used in the following activities?

a. Water for taking a shower

b. Watering crops in a field

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c. Watering flowering plants

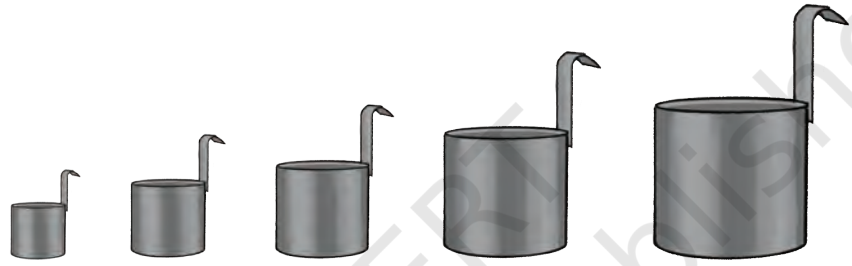
d. Washing clothes

e. _____

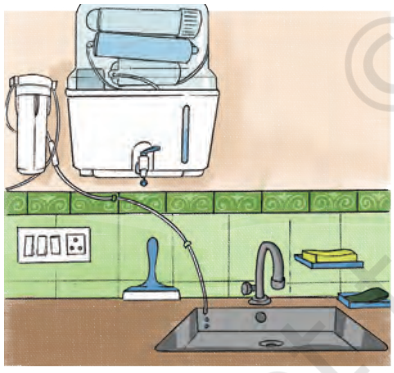
f. _____

Containers Used for Measuring Capacity

Have you seen these measuring cans for measuring milk?



Water Conservation in Everyday Life



Have you ever noticed a small drip of water flowing from your tap or water purifier? Have you considered how much water is actually being wasted?

Take a container and put it under the leaking tap or water purifier for an hour. How much water is lost in an hour from just a slow drip? Did it surprise you?

How much water is lost in a day?

How much do you think is lost in a week?

How would this wastage of water affect us?

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Chapter 9

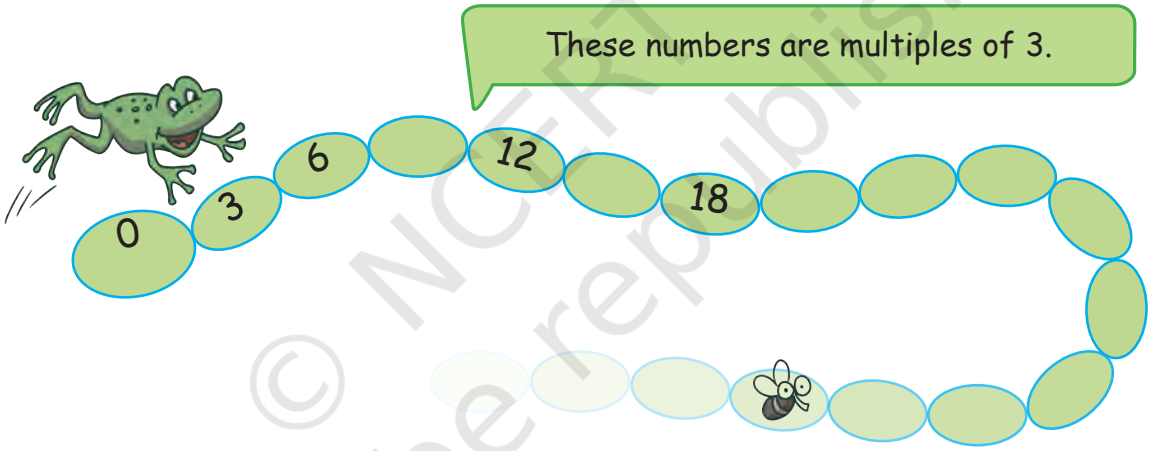
Equal Groups

0433CH09

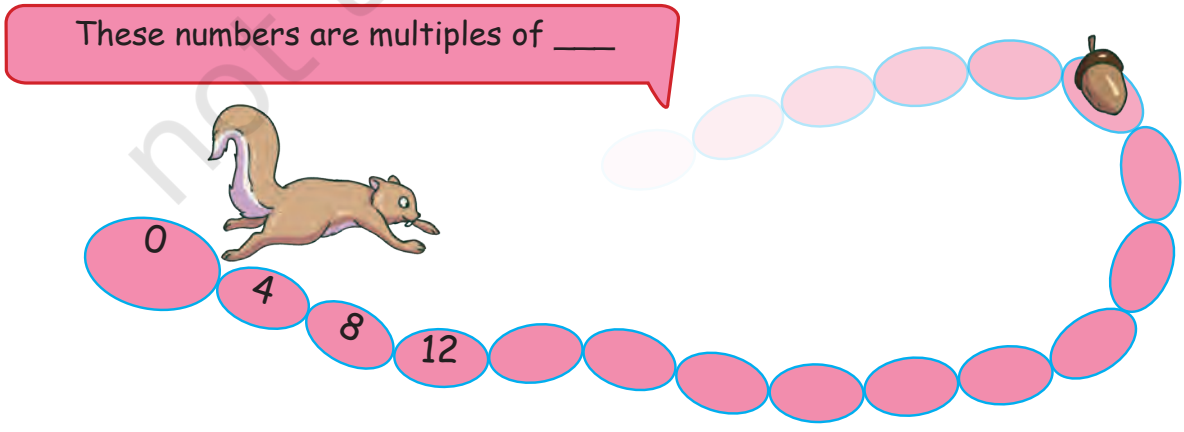
Animal Jumps

Fill in the blank spaces with the appropriate numbers. Find how many jumps the animal needs to take to reach its food.

1. The frog jumps 3 steps at time. Which numbers will the frog touch? Will it touch 67?



2. The squirrel jumps 4 steps at a time. Which numbers will the squirrel touch? How many times should the squirrel jump to reach 60?



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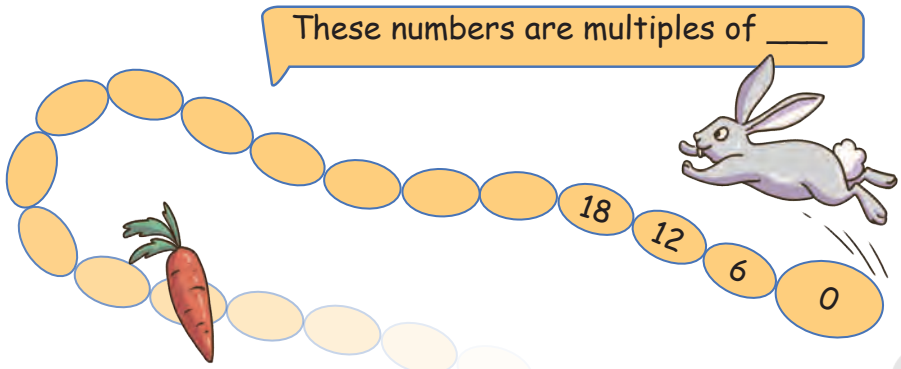
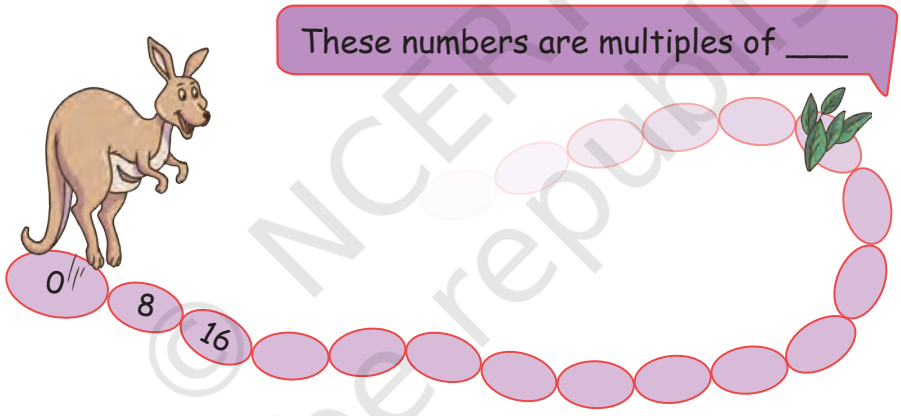
3. The rabbit jumps 6 steps at a time.
Which numbers will the rabbit touch?
What is the smallest 3-digit number on which the rabbit will land?
How many times did the rabbit jump to reach this number?



4. The kangaroo jumps 8 steps at a time. Which numbers will the kangaroo touch?



Are there numbers that both the rabbit and the kangaroo will touch?

5. To reach 48, how many times did the rabbit jump? _____

How many times did the Kangaroo jump to reach the same number?

_____

What did you observe? Share your thoughts.

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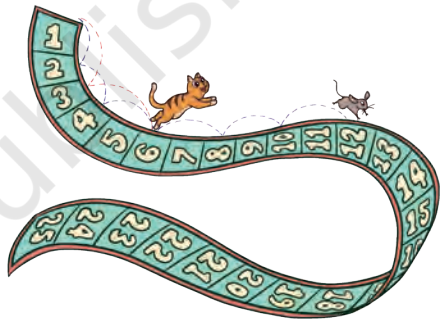
6. To reach 60, how many times did the frog jump? _____
How many times did the rabbit jump to reach the same number?
_____
What do you observe? Share your thoughts.

Common Multiples

1. Which numbers do both the frog and the squirrel touch? A few common multiples of 3 and 4 are _____.

2. Which numbers do both the rabbit and the kangaroo touch? A few common multiples of 6 and 8 are _____.

7. If the cat and the rat land on the same number, the cat will catch the rat.



The cat is now on 6 and the rat on 12. When the cat jumps 3 steps forward, the rat jumps 2 steps forward. Will the cat catch the rat? If yes, at which number?

8. Find multiplication and division sentences below. Shade the sentences. How many can you find?

Two examples are done for you.

3	4	2	7	4	9	8	2
4	2	10	20	5	2	2	4
12	8	0	6	4	8	8	1
3	2	6	2	2	6	16	2
2	3	6	18	6	5	3	1
10	3	4	1	12	2	7	14
2	0	2	2	6	10	7	2
20	5	8	2	2	5	10	2

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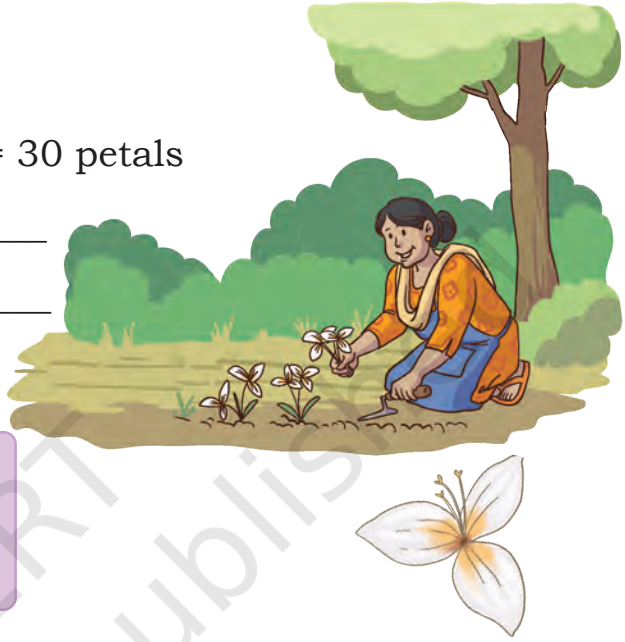
Gulabo's Garden

1. Gulabo's garden has lily flowers. Each lily flower has 3 petals. How many petals are there in 12 flowers? Show how you found your answer.



Gulabo will have 12 × 3 petals.

Petals in 10 lilies 10 × 3 petals = 30 petals

Petals in 2 lilies _____

Petals in 12 lilies _____

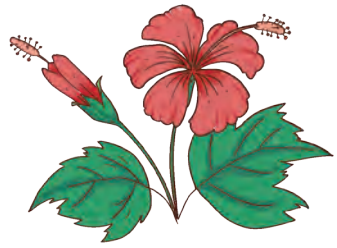
No. of groups (Multiplier)

12 × 3 = 36 *(Product)*

Group size (Multiplicand)

Multiplication statement

2. In a hibiscus flower there are 5 petals. Gulabo counted all the petals and found them to be 80. How many flowers did she have?



Gulabo has 80 ÷ 5 flowers.

5 petals is 1 flower.

10 petals are 2 flowers.

50 petals are 10 flowers.

Then, 80 petals are _____ flowers.

Note for Teachers: In this chapter, the focus is on multiplying 1-, 2-, and 3-digit numbers by 1-digit numbers, with group sizes less than 10. Children should be encouraged to break down the 'multiplier (no. of groups)' into multiples of 10 to simplify calculations. They can also use strategies like doubling and halving.

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3. Gulabo plants some marigold saplings in a box as shown in the picture.

There are _____ saplings in each row.

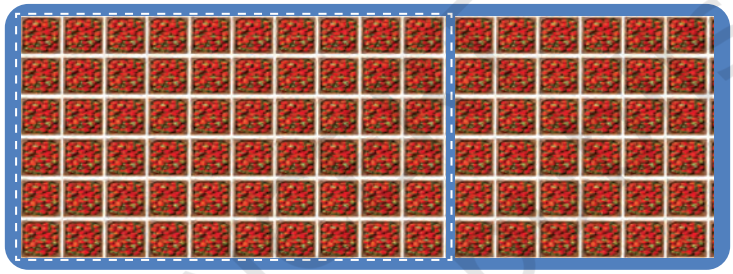
There are _____ rows.

How many saplings has she planted?

How did you calculate it?

Mathematical Statement _____

4. "Dailyfresh" supermarket has kept boxes of strawberries in a big tray.
How many boxes of strawberries does the supermarket have?
Show how you found them.



There are _____ columns of strawberry boxes.

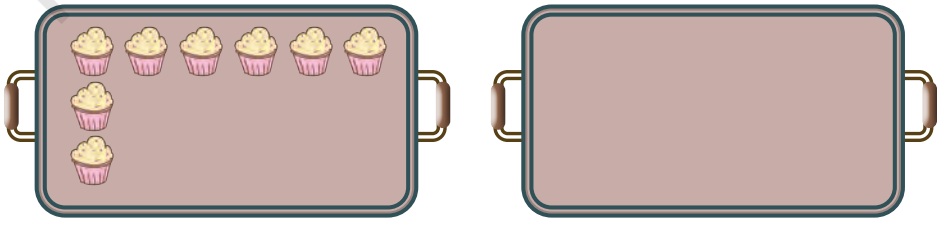
There are _____ boxes in each column.

There are _____ boxes in all.

Mathematical Statement _____

5. Radha runs a bakery shop. She bakes 18 cupcakes in one tray of the size shown below.

a) Complete arranging the cupcakes in the two trays given below.



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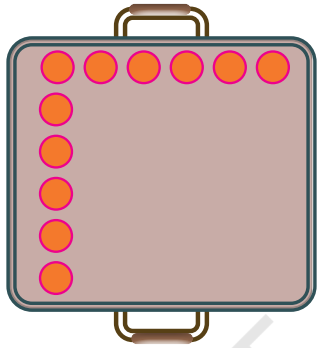
b) She can use two such trays in her oven at a time. How many cupcakes can she make in one attempt? _____

c) Today she has received a special order. She has made 108 cupcakes. How many trays has she baked?

d) She has another square baking tray. She can bake 36 mini cupcakes in such a tray. Complete the arrangement below.



Number of columns: _____

Number of cupcakes in each column: _____

Multiplication statement _____

Find different ways of arranging the following numbers of cupcakes in rows and columns in your notebook.
36, 8, 12, and 24

The Doubling Magic

Magician Anvi came one day,

To Gulabo's house, ready to play.

From her coat, with a grand display,

Note for Teachers: Encourage learners to identify different ways of finding the answers. Children can skip count, count in rows and columns and think in terms of equal groups. The idea is to make children notice arrays as a way of representing multiplication.

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She pulled out 23 flowers, bright and gay!

She smiled and said, "Now watch and see,
How many flowers will there be?"

How many flowers are there now? _____

What magic did Anvi do?

Flowers before magic	23	10	51	95	150	199	425	500			
Flowers after magic	46								222	410	500

a) Double of 32 =_____ b) Double of 14 =_____ c) Double of 26 =_____

d) Double of 17 =_____ e) Double of 39 =_____ f) Double of 45 =_____

1. Guess what will be the ones digit of the following numbers when doubled.
   Write the ones digit in the space provided.

   a) 28 _____ b) 56 _____ c) 45 _____ d) 17 _____

2. Give examples of numbers that when doubled give the following digits in the ones place.

   a) 0 _____ b) 2 _____ c) 4 _____

   d) 6 _____ e) 8 _____

Can we get 3, 5, 7, 9 as the ones digit after doubling?

What do we notice about the numbers that we get after doubling? Even or Odd?

Note for Teachers: Encourage children to use Diene's blocks or a ganit mala to double or half, especially for big numbers. Doubling and halving are useful strategies to include when teaching multiplication and division. Teacher can systematically change the numbers to include different digits in the ones place.

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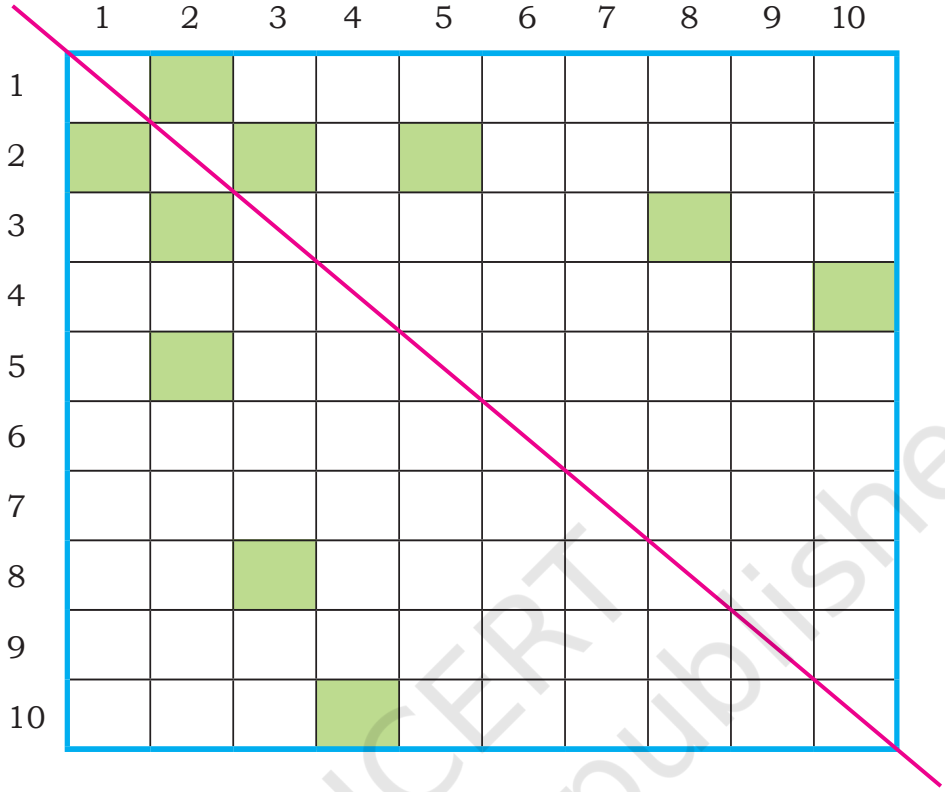
Fill each square in the chart by multiplying the row number by the column number.



What do you notice about the numbers shaded in green? Why is this happening?

1. Share the patterns that you notice in the table.
2. Are the numbers in row 7 the same as the numbers in column 7? In general, are the numbers in a given row the same as the numbers in the corresponding column? Why does this happen?
3. Is there a row where all answers (products) are even numbers? Which rows have this property?
4. Is there a row having only odd numbers as products?
5. Are there rows that have both even and odd numbers? What do you notice? Why is it so?
6. Are there more even numbers in the chart or odd numbers? How do you know?

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7. Colour the common multiples of the following numbers. Use different colours for each item.

   a) 2 and 3 b) 4 and 8 c) 7 and 9

   Share your observations regarding the numbers that are common multiples in each case.

8. Observe the pattern in the ones digits of the products in row 5?

   Observe the ones digit of the products in other rows also. What patterns do you notice?

9. Here is row 8 of the chart: 8, 16, 24, 32, 40, 48, 56, 64, 72, 80
   The ones digit of the products are: 8, 6, 4, 2, 0, 8, 6, 4, 2, 0

   Do you see a repeating pattern here?

   Guess the ones digit of the following products. Verify your answer by multiplying. Write the digit in the space given.

   11×8 _____ 12×8 _____ 13×8 _____

10. In row 8 of the chart, there is no number whose ones digit is 1. What other digits do not appear as the ones digit?
11. Is there a row in which all the digits from 0 to 9 appear as the ones digit? Which rows have this property?
12. It can be seen in row 8 that 0 appears as the ones digit two times.

    $\square \times 8$ gives 0 as the ones digit.

What numbers can go in the box? Give 5 examples of such numbers.

13. Is there a row in which 0 appears as the ones digit only once? Which rows have this property?
14. What do you notice about the answers for Questions 11 and 13? Share in the grade .

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Multiples of Tens

1. Let us count the number of wheels in tricycles.

Number of wheels in 10 tricycles with 3 wheels in each is 10 × 3 wheels = _____ wheels.

Number of wheels in 10 more tricycles with 3 wheels in each is 10 × 3 wheels = _____ wheels.

Number of wheels in 20 tricycles with 3 wheels in each is 20 × 3 wheels = _____ + _____ = _____ wheels.

10 × 3 = _____
20 × 3 = _____

2. Let us count the number of wheels in cars.

Number of wheels in 10 cars with 4 wheels in each is 10 × 4 wheels = _____ wheels.

Number of wheels in 30 cars with 4 wheels in each is 30 × 4 wheels = _____ + _____ + _____ = _____ wheels.

10 × 4 = _____
30 × 4 = _____

What happens when the number of groups is a multiple of 10?

Solve the following in a similar way. Share how you found the answers.

a) 10 × 6 = _____
b) 40 × 6 = _____

c) 10 × 8 = _____
d) 60 × 8 = _____

e) 6 × 8 = _____
f) 60 × 8 = _____

g) 4 × 6 = _____
h) 40 × 8 = _____

Note for Teachers: Encourage children to identify the relationship between products like above. Ten-times is a good way of articulating this relationship between products 6 × 8 and 60 × 8. Three-times could be a way of describing the relationship between 10 × 4 and 30 × 4.

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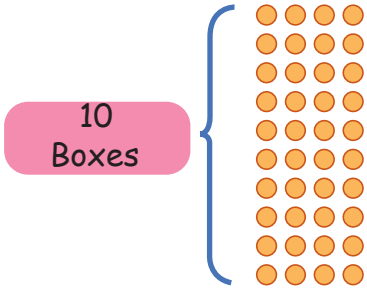
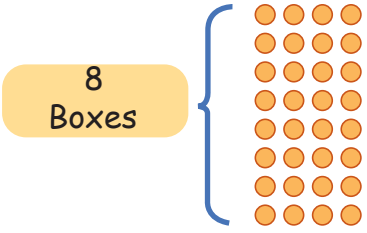
Multiplying Using 10s

1. Radha is packing cupcakes in boxes of 4. She has packed 18 boxes. How many cupcakes are there in the packed boxes?



18 boxes have 4 cupcakes in each.
So, there are 18 × 4 cupcakes.

10 boxes with 4 cupcakes in each contain
10 × 4 cupcakes = _____ cupcakes.

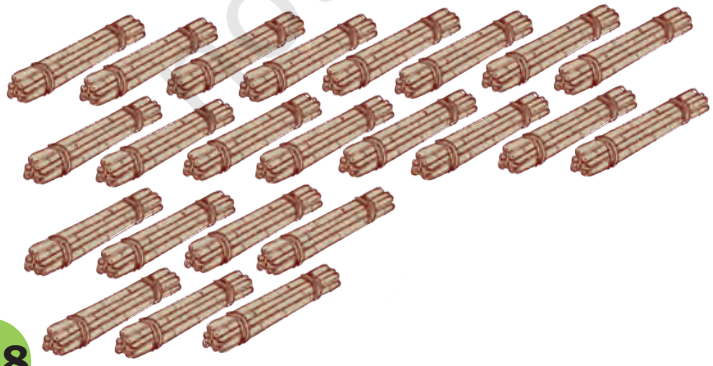


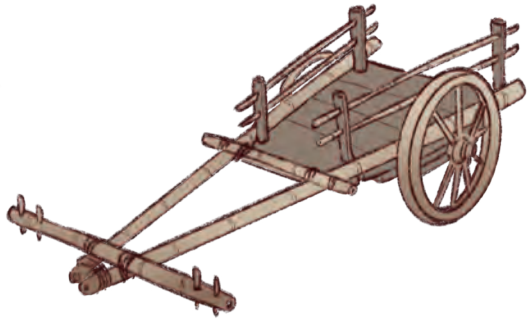
8 boxes with 4 cupcakes in each contain
8 × 4 cupcakes = _____ cupcakes.

18 boxes with 4 cupcakes in each
contain ____ + ____ cupcakes
= _____ cupcakes.

×	4
10	10 × 4 = 40
8	8 × 4 = 32
	72

2. 8 bamboo rods are needed to make a bullock cart. How many bamboo rods are needed for 23 carts?





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One cart needs 8 bamboo rods. 23 carts need 23 × 8 rods.

20 carts with 8 rods in each need

20 × 8 rods = _____ rods.

3 carts with 8 rods in each need

3 × 8 rods = _____ rods.

×	8
20	20 × 8 = 160
3	3 × 8 = 24
	184

Let Us Solve

1. A flock of 25 geese and 12 sheep have gathered around a pond. Chippi the lizard sees many legs.
How many legs does it see?

2. In an auditorium, 8 children are sitting in each row. There are 15 such rows in the school auditorium. How many children are in the auditorium?

3. A book shop has kept 9 books in each pile. There are 14 such piles. How many books does the shop have?

4. Surya is making a patch work with beads of two colours as shown in the picture. How many beads has he used? How many each of golden colour beads and white colour beads has he used in making this patch work?

5. For each of the following multiplication problems, make your own stories as above. Then find out the product.

   a) 34 × 3 b) 75 × 5

   c) 46 × 6 d) 50 × 9

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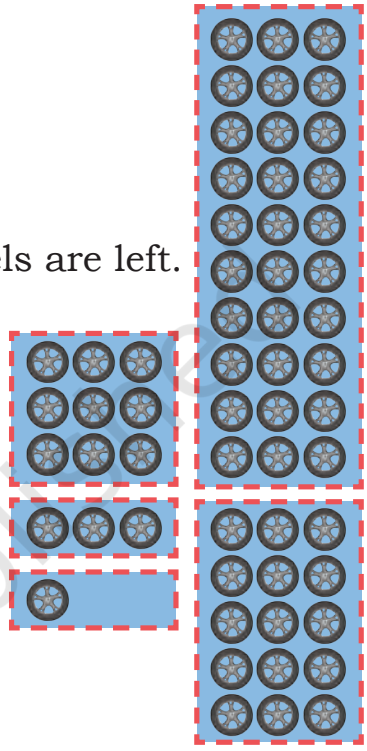
Division

1. A factory has ordered 58 wheels for the small tempos that they make. Each tempo has 3 wheels.

In how many tempos can they fix the wheels?
Discuss your thinking in each step.



Number of tempos is 58 ÷ 3
30 wheels are needed for 10 tempos. _____wheels are left.

15 wheels are needed for _____ tempos.
_____wheels are left.

9 wheels are needed for_____ tempos.
_____ wheels are left.

_____ wheels are needed for_____ tempos.
_____ wheels are left.

Can we make another tempo?
How many total tempos can the factory make using the 58 wheels?
_____

```
3) 58 ( 10+5+3+1
  -30
   28
  -15
   13
  - 9
    4
  - 3
    1
```

With 58 wheels, we can make 19 tempos.
1 wheel is left.

Note for Teachers: The division performed here is by partial quotient method. It is carried out by taking away groups of 10s, 5s or any other small multiples, which are easily available to children. Children can choose multiples of their own choice to solve the problems. Encourage them to gradually shift to taking away 10s and multiples of 10s.

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2. A dairy farm has many cows. Chippi the lizard is surprised to see 88 legs.
How many cows are there in the farm? Write appropriate sentences as above to show your thinking.

Number of legs of a cow: _____
Number of cows is 88 ÷ _____

Show your work using the table below.
Hint: Taking out groups of 10s is easy.

No. of legs	No. of cows	No. of legs remaining
40 _____ _____	10 _____ _____	88 48 _____ _____

4) 88 (10+
– 40
48
–

Total number of cows = _____

Let Us Solve

1. In a big aquarium, Jolly fish sees 72 legs of octopuses. How many octopuses are there in the aquarium?

2. A sports store packs 4 shuttlecocks in a bigger box. They have 50 shuttlecocks.
How many boxes will they need to pack all of them? Can they pack all the shuttlecocks in the boxes? How many are left?
3. Rakul Chachi uses a part of her farm to grow flowering plants for the upcoming festive season. She has planted 75 saplings of roses. Each row has 5 saplings. How many rows of saplings has she planted?
4. Make stories for the following problems and solve them:
   a) 70 ÷ 5
   b) 84 ÷ 7
   c) 69 ÷ 3
   d) 93 ÷ 6

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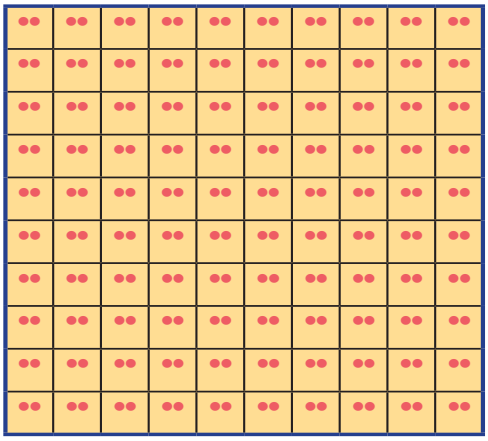
Multiples of 100

2 people on each bike

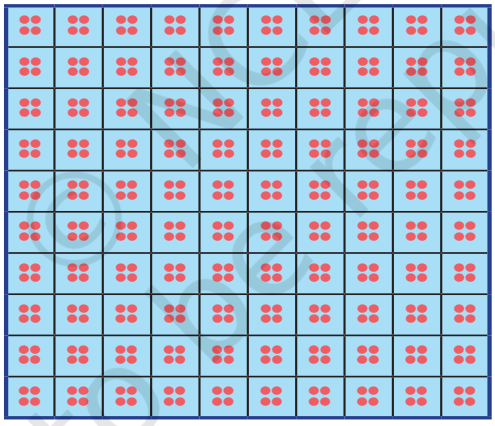


100 bikes with 2 people on each have
100 × 2 people = _____ people.

200 bikes with 2 people on each have
_____people.
How did you find it?

100 cars with 4 people in each have
100 × 4 people = _____ people.

500 cars with 4 people in each have
_____people.
How did you find it?



4 people in each car

500 × 4 = _____
100 × 4 = _____

5 × 4 = _____
50 × 4 = _____

What do you notice about multiplying by multiples of 100s?

Note for Teachers: Encourage children to work out the answers in different ways. Also help them notice the relationship between single digit multiplication and multiples of 100s of the same group size. Expressing the relationship as 'hundred-times' is appropriate.

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Observe the pattern and complete the answers.

1 × 3 =	2 × 3 =	4 × 3 =
10 × 3 =	20 × 3 =	40 × 3 =
100 × 3 =	200 × 3 =	400 × 3 =

2 × 4 =	4 × 2 =	8 × 1 =
20 × 4 =	40 × 2 =	80 × 1=
200 × 4 =	400 × 2 =	800 × 1 =

3 × 4 =	3 × 5 =	3 × 9 =
30 × 4 =	30 × 5 =	30 × 9 =
300 × 4 =	300 × 5 =	300 × 9 =

More Multiplication

1. Big electric autorickshaws run in small towns of India and can carry 8 passengers. How many people can travel in 125 such autos in a single round?

8	8	8	8	8	8	8	8	8	8
8	8	8	8	8	8	8	8	8	8
8	8	8	8	8	8	8	8	8	8
8	8	8	8	8	8	8	8	8	8
8	8	8	8	8	8	8	8	8	8
8	8	8	8	8	8	8	8	8	8
8	8	8	8	8	8	8	8	8	8
8	8	8	8	8	8	8	8	8	8
8	8	8	8	8	8	8	8	8	8
8	8	8	8	8	8	8	8	8	8

100 autorickshaws with 8 passengers each

8	8	8	8	8	8	8	8	8	8
8	8	8	8	8	8	8	8	8	8

20 autorickshaws with 8 passengers each

8	8	8	8	8

5 autorickshaws with 8 passengers each

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The total number of passengers 125 × 8.

×	8
100	100 × 8 = 800
20	20 × 8 = 160
5	5 × 8 = 40
	1000

100 autorickshaws with 8 passengers in each have 100 × 8 passengers = _____ passengers.

20 autorickshaws with 8 passengers in each have 20 × 8 passengers = _____ passengers.

5 autorickshaws with 8 passengers in each have 5 × 8 passengers = _____ passengers.

125 autorickshaws with 8 passengers in each have ____ + ____ + _____= _____ passengers.

2. Kahlu and Rabia are potters and make earthen pots *(kulhad)* for trains.

They pack 6 *kulhads* in a box and have packed 174 boxes for delivery.

How many *kulhads* have they made?

The total number of *kulhads* is _____.

100 boxes with 6 *kulhads* each

70 boxes with 6 *kulhads* each

4 boxes with 6 *kulhads* each

174

×	6
100	100 × 6 = ____
70	70 × 6 = ____
4	4 ×6 = ____

Let Us Solve

1. BP Girl's school has decided to give all its students two pencils on the first day of school.
It has 465 students.
How many pencils does the school need to buy?

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2. 234 children of a school have decided to organise a school mela. Each child contributes ₹5 for the organisation of the mela. How much money do they collect?

3. Make stories for the following problems and solve them.
   a) 439 × 4 b) 514 × 8
   c) 356 × 5 d) 623 × 7

More Division

9 boats have to ferry 108 people waiting along the banks of the Cauvery River. Every boat carries the same number of people. How many people should be ferried in each boat?

108 people are to be ferried in 9 boats.
In 1 boat, the number of people ferried is 108 ÷ 9.

If 5 people sit in each of the boats, then 45 people can be ferried in 9 boats.
If 5 more people sit along with them in each of the boats (total 10), then 90 people can be ferried in the 9 boats.

The remaining 18 people have to be adjusted in the 9 boats. 2 more people will have to sit in each of the boats.
So, the 9 boats need to take 12 people each.

```
9) 108 ( 5+5+2
  - 45
    63
  - 45
    18
  -  18
     0
```

9 boats need to take 12 people each.

Note for Teachers: Division problems are of 2 types—share and measure. In share problems, the number of equal groups is given (i.e the multiplier) leading to opportunities to share objects equally. The example above is a share problem. In measure problems, the size of each group is given (i.e, the multiplicand), like when we ask how many ants are there if the number of legs is 60. Including both kinds of problems is helpful for children.

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Patterns in Division

How much money will each get? Draw arrows linking the money and the children to answer the questions.

1. ₹30 shared equally among 3 children _____
2. ₹900 shared equally among 3 children _____

Using the above way of thinking, solve the following problems.
Observe and explain the patterns that you notice below.

A

3 ÷ 3 = _____
30 ÷ 3 = _____
300 ÷ 3 = _____

5 ÷ 5 = _____
50 ÷ 5 = _____
500 ÷ 5 = _____

B

9 ÷ 3 = _____
90 ÷ 3 = _____
900 ÷ 3 = _____

8 ÷ 4 = _____
80 ÷ 4 = _____
800 ÷ 4 = _____

C

15 ÷ 3 = _____
150 ÷ 3 = _____
300 ÷ 3 = _____

4 ÷ 2 = _____
20 ÷ 2 = _____
100 ÷ 2 = _____

1. A load carrying truck has 6 tyres. Chippi the lizard sees 60 tyres. How many trucks are there?
2. Chippi sees 80 wheels in a car parking space. How many cars are standing in the parking space?
3. Chippi sees 600 legs of ants walking towards the anthill. How many ants are there?
4. A fancy shop has packed 800 rubber bands in several packets. Each packet has 4 rubber bands.
   How many packets of rubber bands does the shop have?

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Let Us Solve

1. A school bus hires 7 buses to take 245 children to the transport museum. Each bus carry the same number of children. How many children are traveling in each bus?
2. The Darjeeling Himalayan Railway is fondly called the "Toy Train". This toy train ride is also a UNESCO World Heritage Site.
   This amazing train runs between New Jalpaiguri and Darjeeling and it also passes through one of the highest stations in the world, namely, Ghum. It runs 88 km daily. How much distance does it travel in a week?

3. The 16 Km river rafting from Shivpuri to Rishikesh in the Ganga provides the most interesting rafting opportunity. In the summer months, VentureOut company took 259 people for rafting. Each raft can take 7 people. How many rafts did it take?
4. Anu saves ₹45 every month by putting it in her piggy bank.
   a) How much money will Anu save in 6 months?
   b) She distributes the total money saved after 6 months among 6 of her friends. How much does each friend get?
   c) If she decides to distribute the saved money among 3 friends after 6 months, how much money will each get?
5. Raju drives an auto in his village and takes people to the bus stand. He makes 8 trips in a day. Which of the following questions can be exactly calculated with the above statement?
   a) How much money does he make in a day?
   b) How many trips does he make in 7 days?

Note for Teachers: Encourage the children to observe relationships between divisor, dividend and quotient, understand the relationship between quotients when the dividend is changed by 5 times/10 times, and the relationship between multiplication and division.

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c) How much time does one trip take?

d) How many trips does he make in 4 weeks?

6. Solve

a) 45 × 9 b) 507 × 7

c) 94 ÷ 4 d) 778 ÷ 6

e) 94 × 5 f) 396 × 4

g) 83 ÷ 3 h) 635 ÷ 5

7. In mathematics, some statements are always true, some are sometimes true, and some are never true.
Tick (√) in the appropriate column.

	Statement	Always True	Never True	Sometimes True
a)	Multiplying by 10 gives 0 in the ones digit of the number.			
b)	Multiplying a number by 2 gives an odd number.			
c)	Multiplying a number by 5 gives a number with 5 in the ones digit.			
d)	The number immediately after an odd number is an even number.			
e)	Halving any number gives an even number.			
f)	Adding 0 to a number increases the number by 1.			

Note for Teachers: The "always true, never true, or sometimes true" type of questions in math are designed to help students understand and evaluate the validity of mathematical statements under different conditions. They encourage critical thinking, testing conceptual understanding and encouraging students to reason logically with counter examples. They help students to move beyond rote memorisation to a better understanding of mathematical principles.

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Chapter 10

Elephants, Tigers, and Leopards

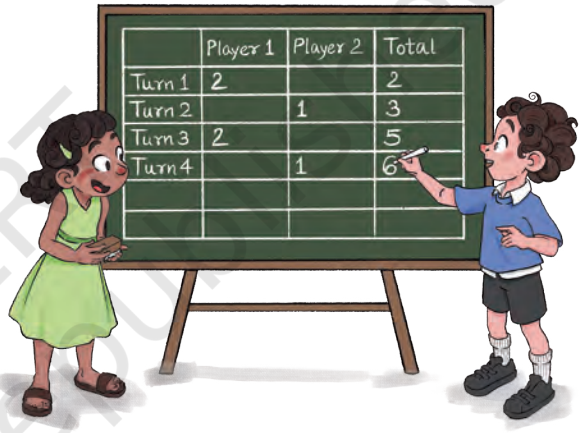
0433CH10

NIM Game *(2 Player Game)*

You have played a version of this game in the chapter 'Vacation with my Nani Maa' in Grade 3. We will add either 1 or 2 each time to reach the target number 10.

How to play?

1. Player 1 starts by choosing either 1 or 2.
2. Player 2 can also choose either 1 or 2 and add it to the number chosen by Player 1.
3. The two players continue playing by choosing either 1 or 2 and adding it to the previous total.
4. The player who reaches 10 first is the winner.
5. Play it for a few rounds.



Who wins in each of these cases?

Can you win the game if

a) the other player has reached the total of 6 and it is your turn?

b) the other player has reached the total of 7 and it is your turn?

c) the other player has reached the total of 8 and it is your turn?

Note for Teachers: Encourage learners to play this game with various target numbers. You could also help note down the sums and the results for learners to analyse.

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Play the game to reach other target numbers (like 10, 11, or 12) by adding 1 or 2 each time.

Can you find a number in each case when you are sure that you can win?

Addition Chart

Look at the table given below and discuss how the table is made.

+	0	1	2	3	4	5	6	7	8	9	10	11	12
0	0	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12	13
2	2	3	4	5	6	7	8	9	10	11	12	13	14
3	3	4	5	6	7	8	9	10	11	12	13	14	15
4	4	5	6	7	8	9	10	11	12	13	14	15	16
5	5	6	7	8	9	10	11	12	13	14	15	16	17
6	6	7	8	9	10	11	12	13	14	15	16	17	18
7	7	8	9	10	11	12	13	14	15	16	17	18	19
8	8	9	10	11	12	13	14	15	16	17	18	19	20
9	9	10	11	12	13	14	15	16	17	18	19	20	21
10	10	11	12	13	14	15	16	17	18	19	20	21	22
11	11	12	13	14	15	16	17	18	19	20	21	22	23
12	12	13	14	15	16	17	18	19	20	21	22	23	24

1. Identify some patterns in the table.
2. Observe the cells where the number 9 appears in the table. How many times do you see number 9?

   What about other numbers?
3. Are there any rows or columns that contain only even numbers or only odd numbers? Explain your observation.

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4. Look at the window frame highlighted in red colour in the table.
   a) Find the sum of the two numbers in each row.
   b) Find the sum of the two numbers in each column. What do you notice?
   c) Now, find the sum of the numbers in each of the two diagonals marked by arrows. What do you notice?
   d) Now, put the red window frame in other places and find the sums as above. What do you notice?
5. Identify some patterns and relationships among the numbers in the blue window frame.

Reverse and Add

a) Take a 2-digit number say, 27. Reverse its digits (72). Add them (99). Repeat for different 2-digit numbers.

b) What sums can we get when we add a 2-digit number with its reverse?

c) List down all numbers which when added to their reverse give
   i) 55 ii) 88

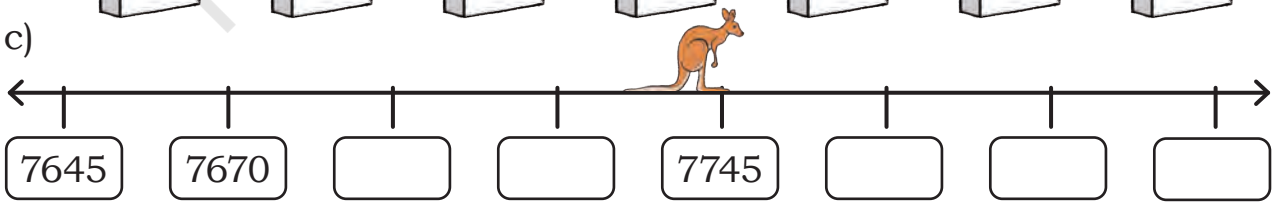
d) Can we get a 3-digit sum? What is the smallest 3-digit sum that we can get?

Fill in the blanks with appropriate numbers.

a)

b)

c)



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How Many Animals?

India is rich in biodiversity. It is home to some of the endangered wildlife, like elephants, tigers and leopards.

$\frac{3}{4}$ of the world's tiger population and $\frac{3}{5}$ of the Asiatic elephant population is in India.

1. The population of elephants in Karnataka is 6049 and in Kerala is 3054. How many total elephants are there in these two states?

Estimate the answer.

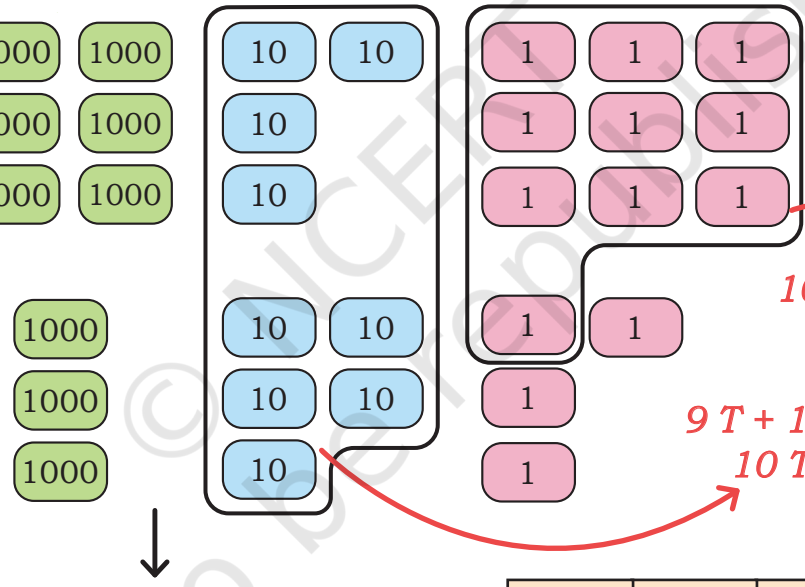
_____

6049 + 3054

6049

+

3054



9 Th + 9 T + 13 O

= 9 Th + 1 H + 0 T + 3 O

= 9103

There are 9103 elephants in Karnataka and Kerala.

	Th	H	T	O
		1	1	
	6	0	4	9
+	3	0	5	4
	9	1	10	13
	9	1	0	3

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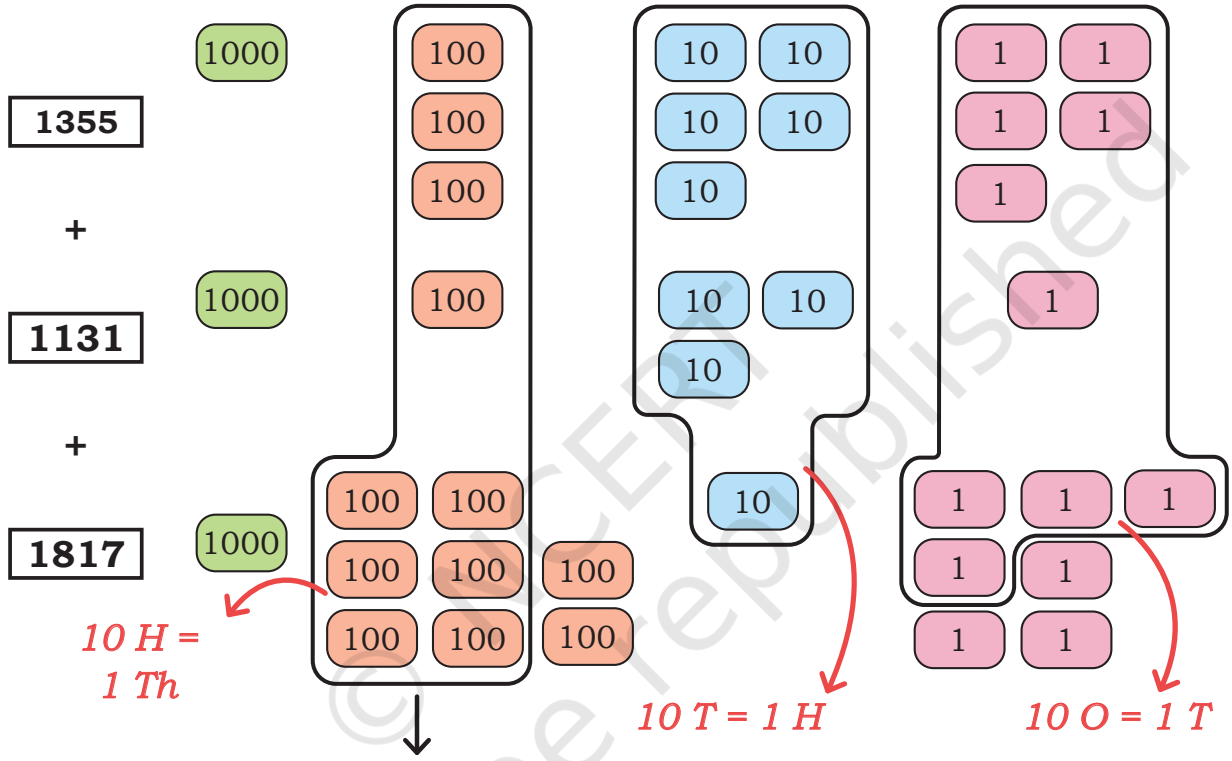
Estimate the answer.

_____

2. The highest number of leopards are found in three states. Gujarat has 1355, Karnataka has 1131 and Madhya Pradesh has 1817. How many total leopards are there in these states?

1355 + 1131 + 1817



3 Th + 12 H + 9 T + 13 O

= 4 Th + 2 H + 10 T + 3 O

= 4 Th + 3 H + 0 T + 3 O

= 4303

	Th	H	T	O
	1	1	1	
	1	3	5	5
	1	1	3	1
+	1	8	1	7
	4	13	10	13
	4	3	0	3

There are 4303 leopards in these three states.

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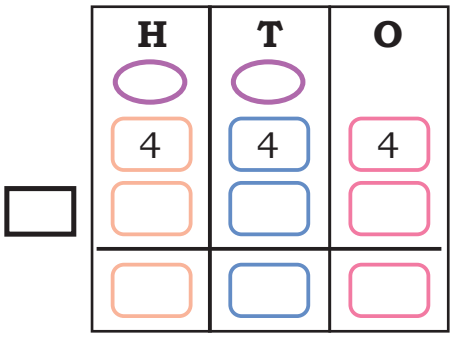
3. Maharashtra has 444 tigers. Madhya Pradesh has 341 more tigers than Maharashta. Uttarakhand has 116 tigers more than Maharashtra.

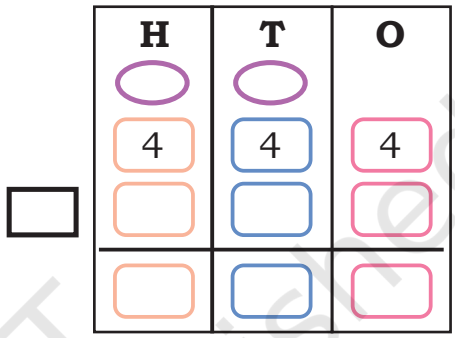
Remember

10 O = 1 T
10 T = 1 H
10 H = 1 Th

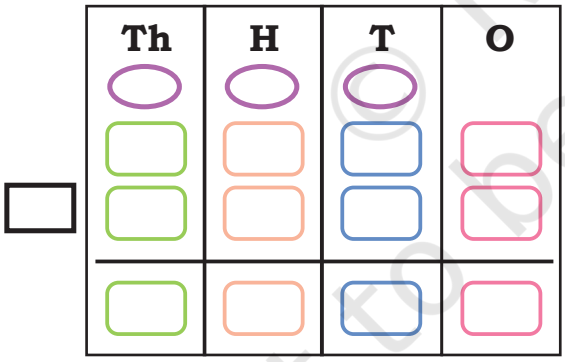
a) How many tigers does Madhya Pradesh have?



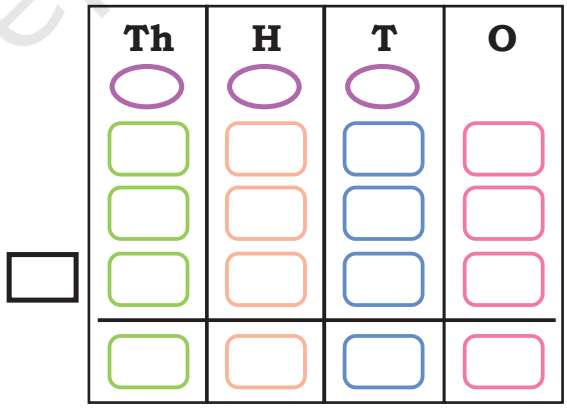
b) How many tigers does Uttarakhand have?



c) How many tigers does Madhya Pradesh and Uttarakhand have?



d) How many tigers are there in total across the three states?



Note for Teachers: Support children with multiple examples using tokens until they can independently solve various types of problems without the materials. You could also support using box diagrams for solving word problems as suggested in the previous chapter.

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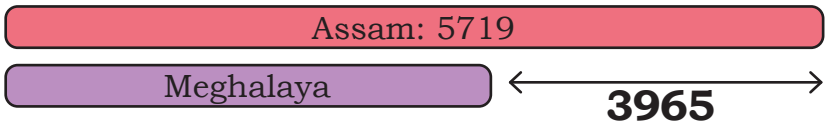
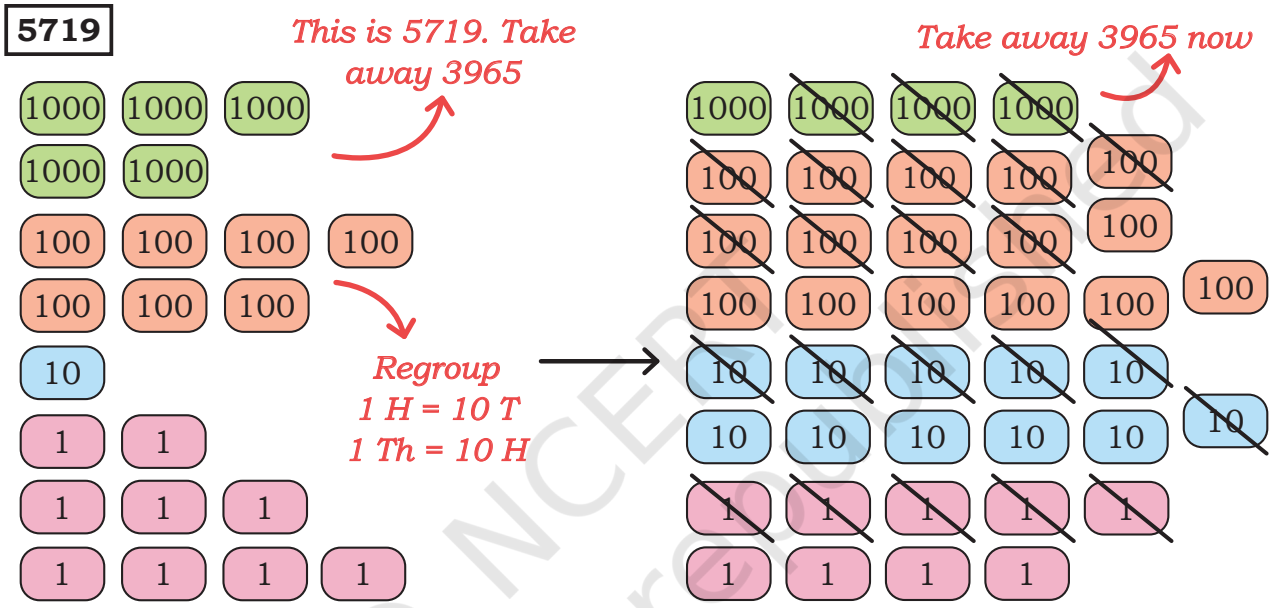
More or Less?

Estimate the answer.
_____

1. Assam has 5719 elephants. It has 3965 more elephants than Meghalaya. How many elephants are there in Meghalaya?



5719 – 3965



	Th	H	T	O
	4	16	11	
	5	7	1	9
–	3	9	6	5
	1	7	5	4

1754 elephants are there in Meghalaya.

Estimate the answer.
_____

2. The population of leopards as per the 2022 census was 8820 in the Central India and the Eastern Ghats. It had increased by 749 in comparison to the number of leopards in 2018 in the same region. How many leopards were there in 2018?

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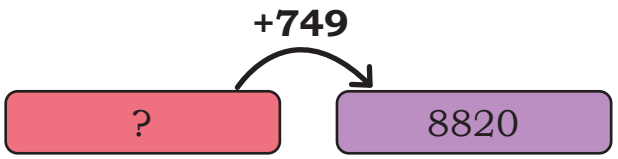

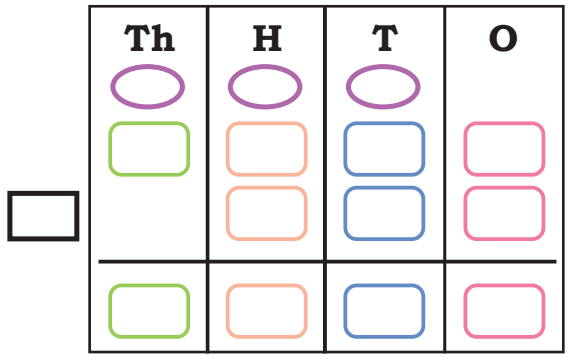

_____ leopards were there in 2018.

Write the number of animals on this map based on the data from the problems in the previous pages.

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Let Us Do

1. The board in the ticket office in the Kaziranga National Park shows the following:

WELCOME TO KAZIRANGA NATIONAL PARK

Month	Number of visitors
December	8591
November	6415
October	?

a) How many more visitors came in December than in November?

b) The number of visitors in November is 1587 more than October. How many visitors were there in October?

2. In a juice making factory, women make different types of juices as given below:

Type of juice	Number of bottles packed in a month
Pineapple	1348
Guava	
Orange	
Passion Fruit	4781

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a) The number of bottles of guava juice is 759 more than the number of bottles of pineapple juice. Find the number of bottles of guava juice.

b) The number of bottles of orange juice is 1257 more than the number of bottles of guava juice and 1417 less than the number of bottles of passion fruit juice. How many bottles of orange juice are made in a month?

c) Is the total number of bottles of guava juice and orange juice more or less than the number of bottles of passion fruit juice? How much more or less?

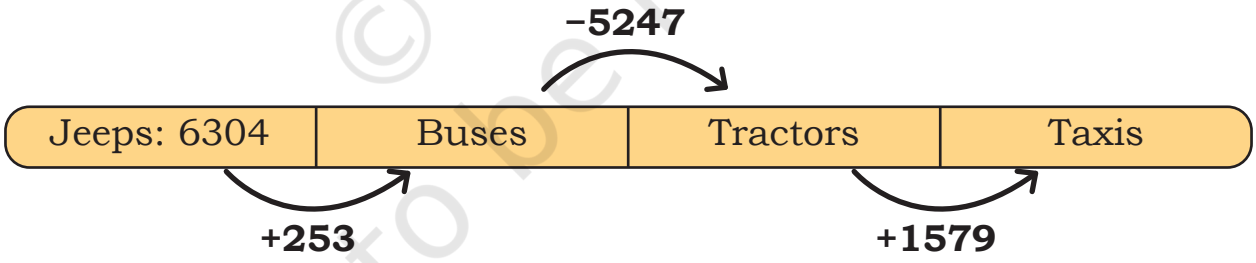
3. In a small town, the following vehicles were registered in the year 2022. Find the number of vehicles as per the conditions given below.

a) The number of buses is 253 more than the number of jeeps. How many buses are there in the town?

b) The number of tractors is 5247 less than the number of buses. How many tractors are in the town?

c) The number of taxis is 1579 more than the number of tractors? How many taxis are there?

d) Arrange the numbers of each type of vehicle from lowest to highest.



4. Solve

a) 1459 + 476
b) 3863 + 4188
c) 5017 + 899
d) 4285 + 2132
e) 3158 + 1052
f) 7293 – 2819
g) 3105 – 1223
h) 8006 – 5567
i) 5000 – 4124
j) 9018 – 487

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5. The children in a school in Chittoor are planning to organise a Baal Mela in their school.

Raju, Rani and Roja decided to raise some money to make arrangements for the mela. The money is availabe in notes of 500, 100, 50, 10 and coins of 5, 2 and 1. They decide to put the money in the School Panchayat Bank.

Raju

₹ 2045

Rani

₹ 3578

Roja

₹ 1240

Help each of the children fill the deposit slip given below.

Different combinations of notes can give the same amount. Can you guess a possible combination of notes they might have? Fill in the amounts appropriately.

SPB

Deposit Slip

Date 2025

Account no.: _____ Name: Raju

Amount (in numbers): ₹2045

Total Amount (in words): _____

_____

_____

_____

Depositor's Signature:

Raju

Type of Note/ coin	No. of Notes/ coins	Amount
500	3	1500
100	3	300
50	2	_____
10	14	_____
5	1	_____
2	0	_____
1	0	_____
Total	_____	_____

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SPB

Deposit Slip

Date D D M M Y Y Y Y

Account no. _____ Name: Rani

Amount (in numbers):_____

Total Amount (in words):_____

_____

_____

_____

Depositor's Signature:

Type of Note/ coin	No. of Notes/ coins	Amount
500		
100		
50		
10		
5		
2		
1		
Total		

SPB

Deposit Slip

Date D D M M Y Y Y Y

Account no. _____ Name: Roja

Amount (in numbers):_____

Total Amount (in words):_____

_____

_____

_____

Depositor's Signature:

Type of Note/ coin	No. of Notes/ coins	Amount
500		
100		
50		
10		
5		
2		
1		
Total		

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Let Us Solve

1. Solve

a)

Th	H	T	O
3	6	9	5
+ 4	2	0	8

b)

Th	H	T	O
2	5	0	7
+ 6	8	4	7

c)

Th	H	T	O
6	3	5	2
− 3	5	2	1

d)

Th	H	T	O
8	8	0	3
− 5	7	2	6

2. Arrange the following in columns and solve in your notebook.

a) 3683 – 971
b) 8432 – 46
c) 4011 – 3666
d) 5203 – 2745

e) 1465 + 632
f) 3567 + 77
g) 8263 + 3737
h) 5429 + 3287

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Let Us Solve

1. Find easy ways to solve the following problems. Write the answers in the given space. Share your thinking with the grade.

a) 8787 – 99 =_____

Subtract 100, then add 1.

b) 4596 + 104=_____

c) 3459 + 21 =_____

d) 5010 + 95 =_____

(e) 4990 + 310 =_____

(f) 7844 – 15 =_____

(g) 260 + 240 =_____

(h) 1575 – 125 =_____

(i) 3999 + 290 =_____

2. Use the signs <, =, > as appropriate to compare the following without actually calculating. Try to reason them out and share in grade .

54 + 97 ☐ 54 + 90

84 – 68 ☐ 90 – 68

76 + 85 ☐ 80 + 86

73 – 54 ☐ 73 – 56

Same number.

Notice what is being subtracted on the left and on the right

3. Use the given information to find the values. Share your reasoning with the grade .

139 + 175 = 314
314 – 175 = _____

845 – 394 = 451
845 – 395 = _____

354 + 167 = 521
354 + 168 = _____

456 + 209 = 665
446 + 219 = _____

Note for Teachers: Encourage children to solve these problems without working out the algorithm but by noticing other ways to solve them. Notice the ways the numbers on both sides increase and decrease and the results. You could model these with some materials like Dienes block or tokens. You could give more such problems to the children.

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1. Add

a) 2783 + 378
b) 8948 + 97
c) 7006 + 367
d) 8009 + 485
e) 6062 + 3809
f) 3792 + 2688
g) 4999 + 3888
h) 5005 + 4895
i) 5768 + 4053
j) 3480 + 479

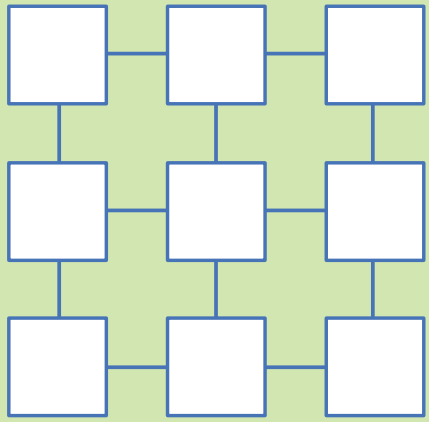
2. Subtract

a) 4456 – 2768
b) 5300 – 467
c) 8067 – 4546
d) 5302 – 1034
e) 8004 – 3107
f) 3400 – 897
g) 9382 – 4857
h) 7561 – 2933
i) 6478 – 5986
j) 3444 – 2555

3. Fill the squares with the numbers 1–9. The difference between any two neighbouring squares (connected by a line) must be odd.

Can you find other ways to fill the squares?

Can you do the same thing such that the difference between any two neighbouring squares is even?



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Chapter 11

Fun with Symmetry

0433CH11

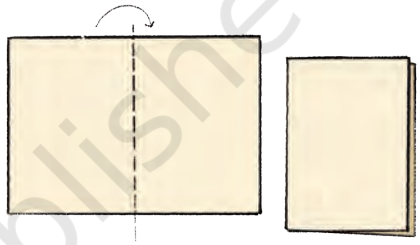
In previous grades, we have explored symmetry in rangolis, masks, bead strings and in buildings.

Let us explore more about symmetry.

Let Us Do

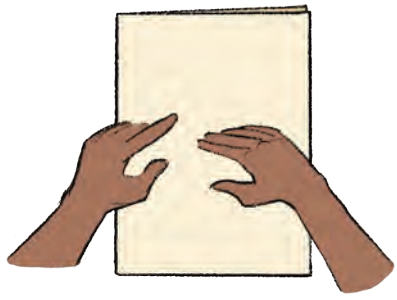
1. Ink Design

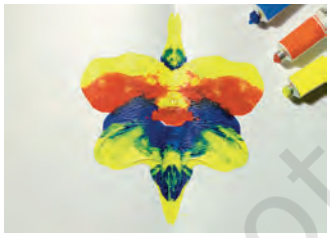
Step 1: Take a sheet of paper and fold it in half.



Step 2: Open it and sprinkle some drops of water colours in the centre of the fold.

Step 3: Press it to spread the colour evenly.





Step 4: Look what you made!

Is it a symmetrical pattern?

Where would you draw the line that divides this design into two equal halves?

Isn't this line called the line of symmetry? I made it while making masks and rangolis in Grade 3 too.

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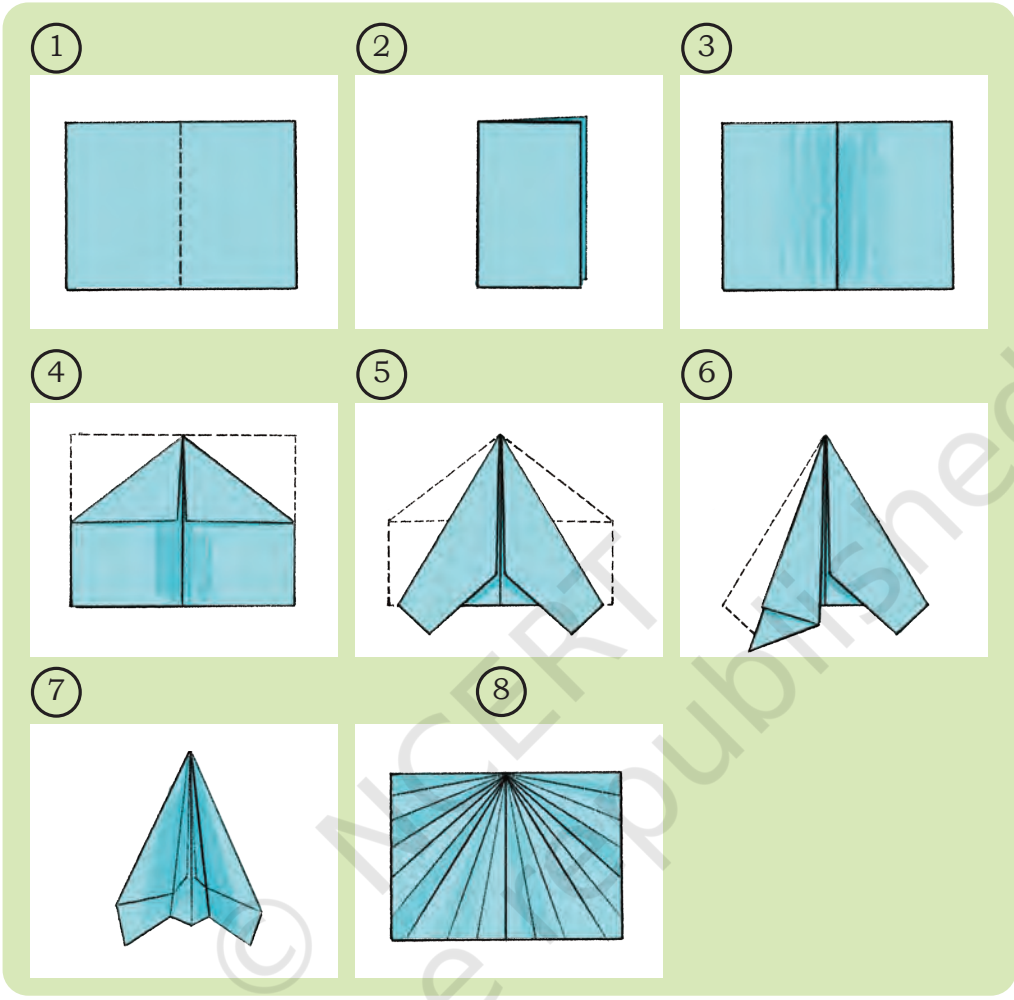
2. Making a paper airplane

Follow the steps.

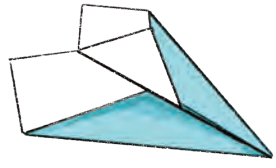


a) Mark the line of symmetry in Fig. 3, Fig. 4, and Fig. 5.

b) How many lines of symmetry can you see in Fig. 8?

c) Where will you place a mirror to see the reflection of the right half side of Fig. 8? Will it look the same as the left half side?

d) Fly the plane.



e) Will the plane fly if there is no line of symmetry?

f) Try to make an asymmetrical plane.

g) Fly both the planes and see which plane flies for a longer time.

h) Share your observations with your friends.

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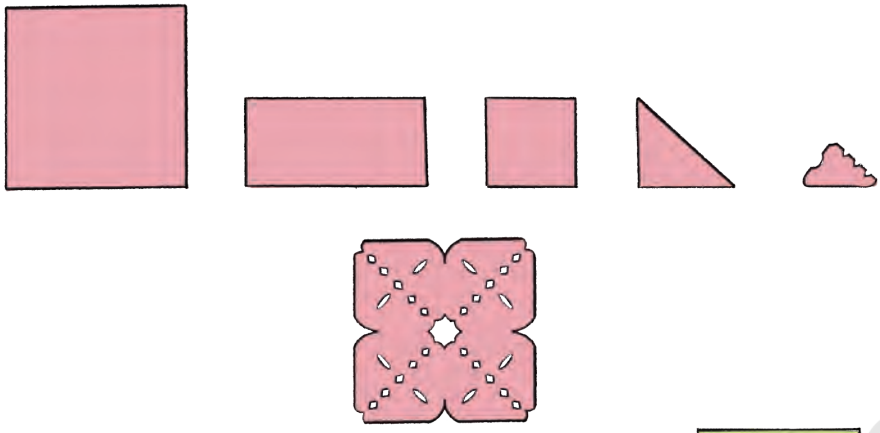
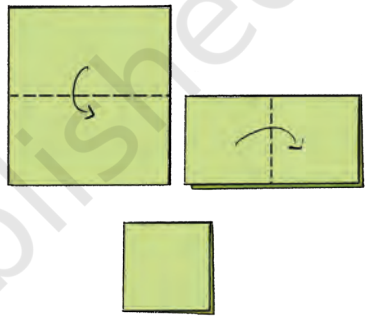
3. Holes and Cuts

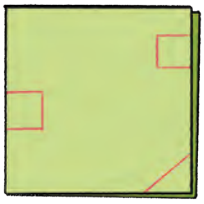
Mini has made this design by folding and cutting paper.



Now it's your turn! Take a square sheet of paper. Do as instructed below.



Let us see what Rani is making. Rani takes a piece of paper and folds it twice.



She makes a straight cut at the corner and cuts out two squares on two sides as shown in the picture.

Challenge 1: Where would the hole and cut appear when you open the paper?

Challenge 2: Fold a piece of paper once; put two cuts in the middle as shown. How many sides will this shape have when you open the folded paper?

Challenge 3: Fold a paper twice. Where would you cut to make a square hole in the center of the paper? How many cuts are required?

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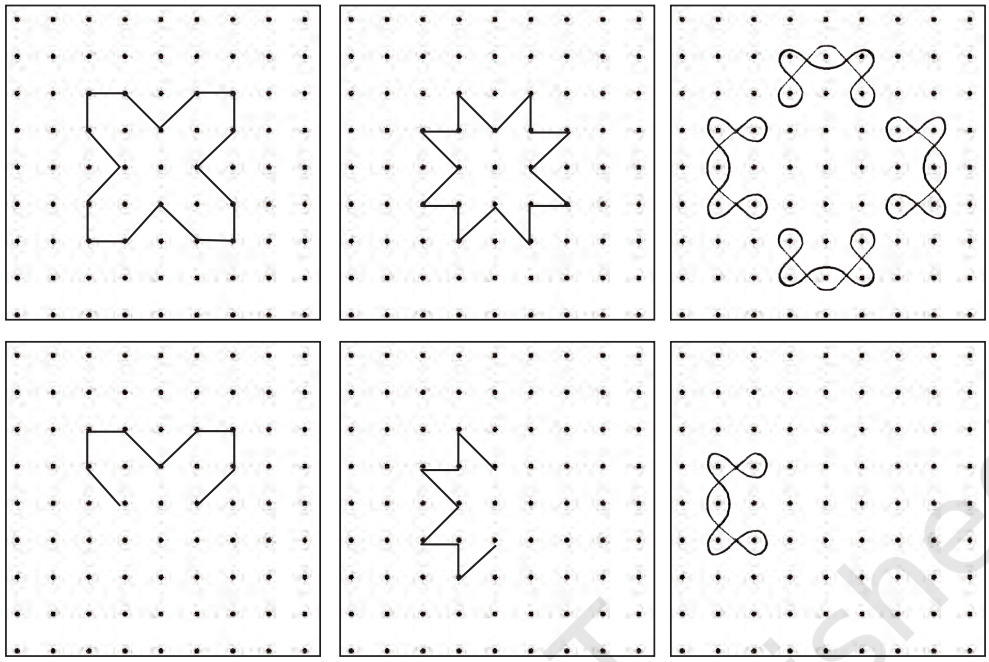
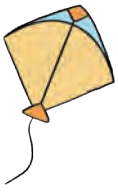
4. Complete the designs below

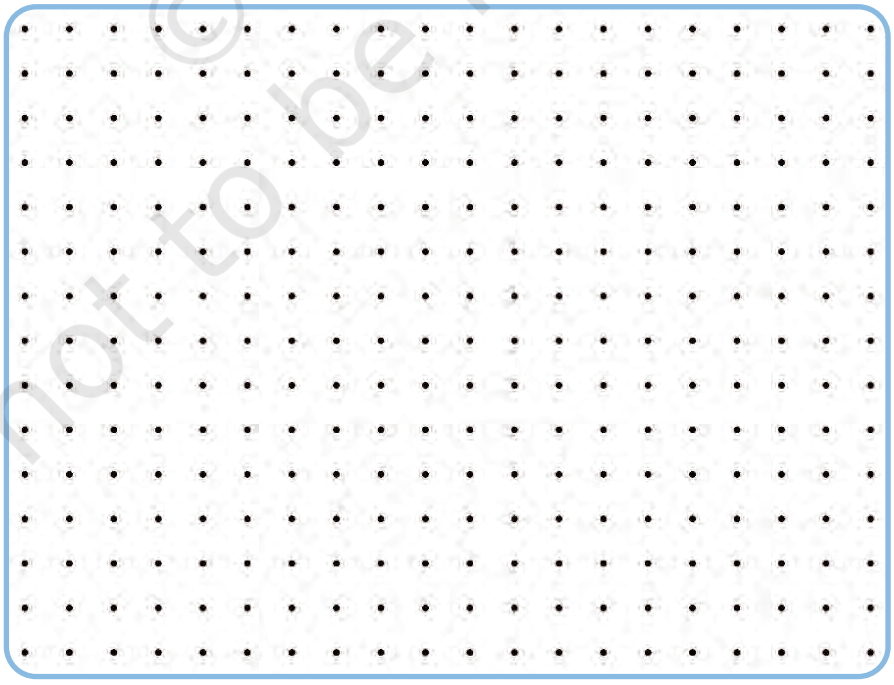


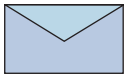
Let Us Do

Symmetry in shapes

1. Look at the shapes given along the border. Draw these shapes on the dot grid. Which of the shapes are symmetrical? Draw the lines of symmetry.







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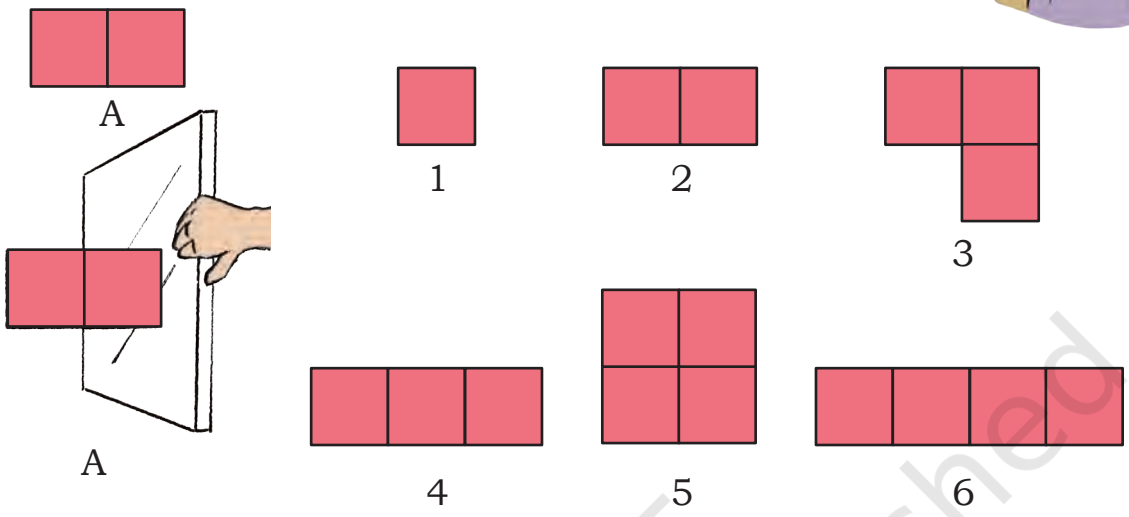
2. Games with a Mirror

a) Where should we place the mirror in shape A to get the shapes given below?



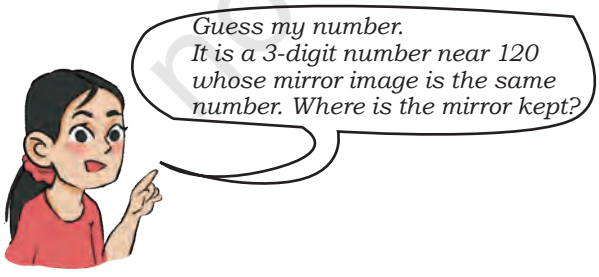
b) Circle the numbers whose mirror image is the same number.

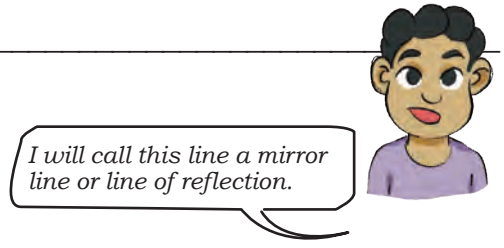
Which digits from 0 to 9 have the same mirror image? _____

Make some 4-digit numbers such that the mirror image is the same number. Where would you keep the mirror in each case? How many such numbers can you make?

_____ _____

_____ _____





c) Make similar questions and ask your friends to guess the numbers.

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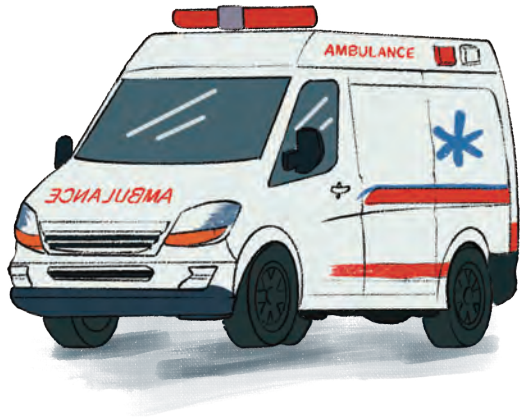
3. What do you notice about the letters written on the ambulance? Why are they written this way? Discuss.



CAT

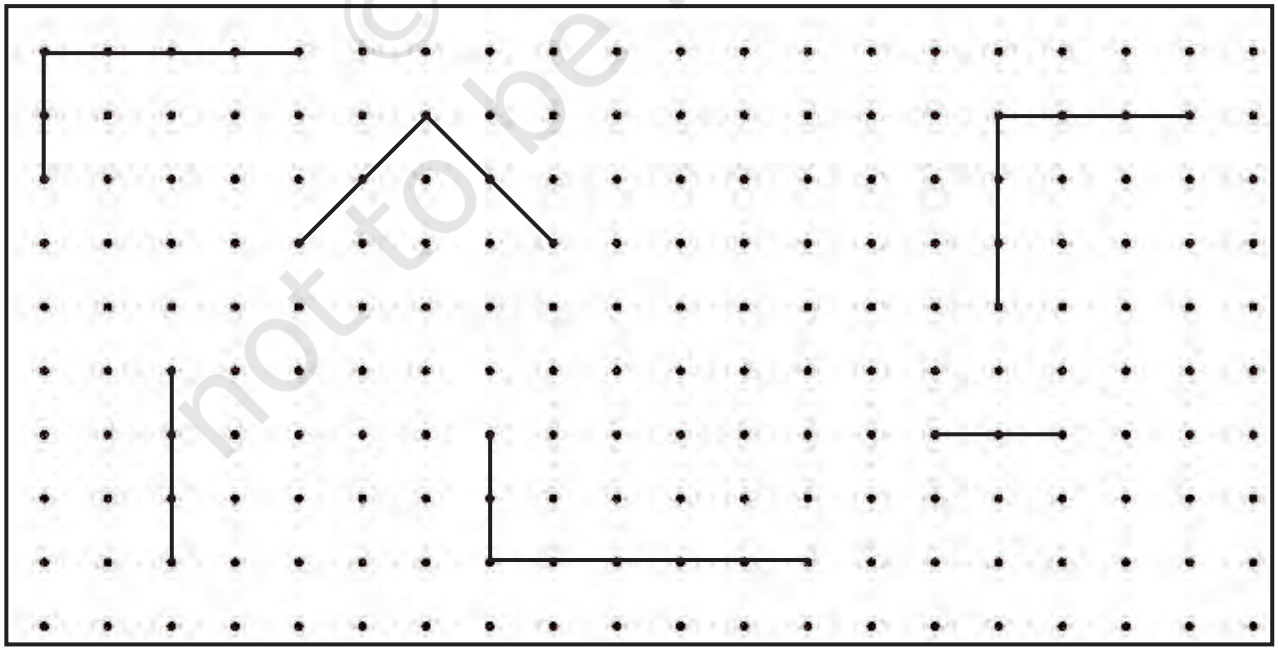
Can you identify these words? Where will you place the mirror to read the following words correctly?

TAP CAN WOW HEN

Now, you try to write some words/names in this way and challenge your friends to guess them.

Can you also try doing this with the script of your own language?

4. Complete the following to make symmetrical shapes.



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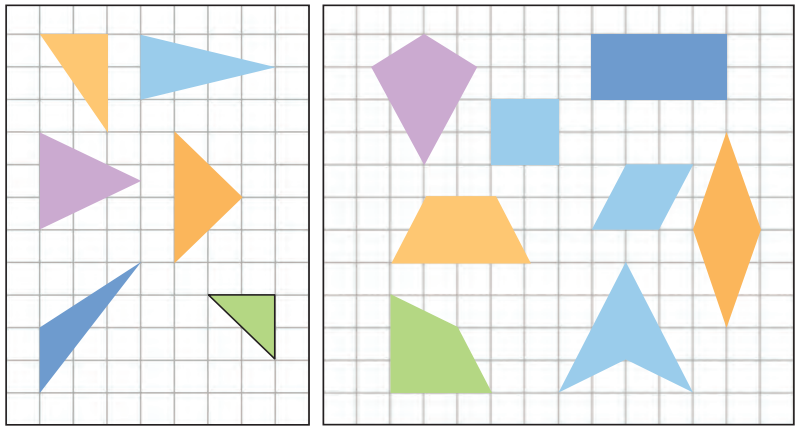
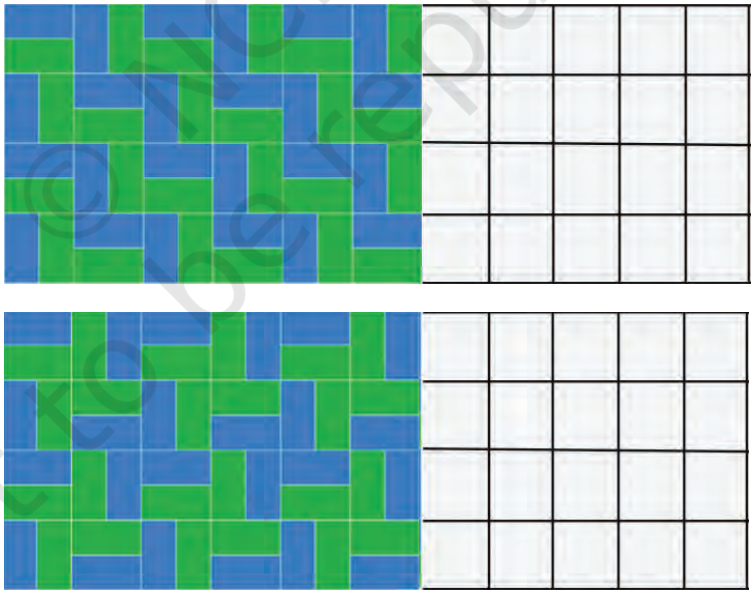
5. Observe the shapes. How many sides does each shape have?

How many lines of symmetry does each shape have? You may trace these shapes and check the lines of symmetry by folding the shapes.



Tiling the Tiles

Here are some patterns with tiles. Identify the repeating unit (tile) and continue the patterns.



Note for Teachers: Let the students realise that just by changing the position and colour, different tiles can be created. Here, students may identify different repeating units as tiles. Let the students use terms, such as sliding, flipping, rotating, standing, sleeping, etc. Students may also see a group of 8 rectangles as a repeating unit.

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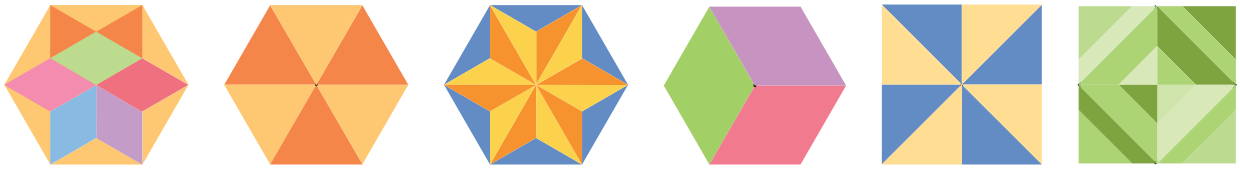
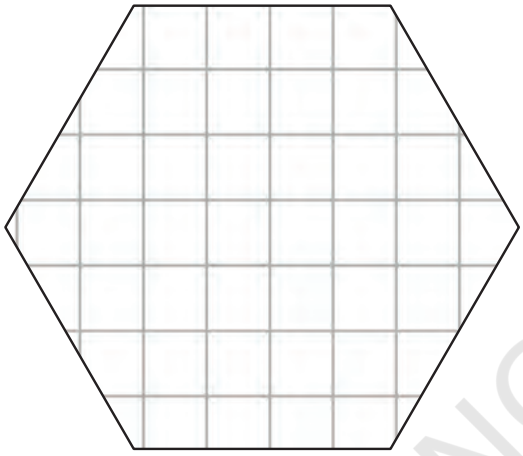
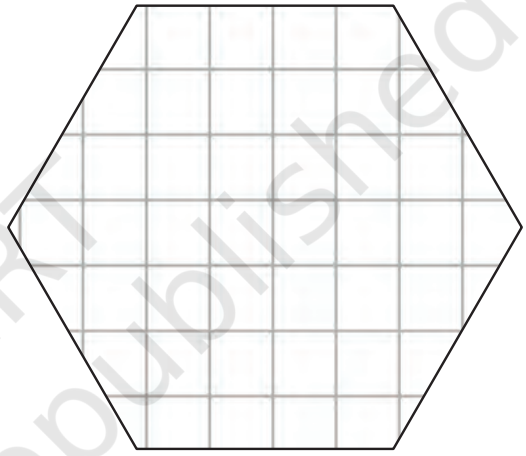
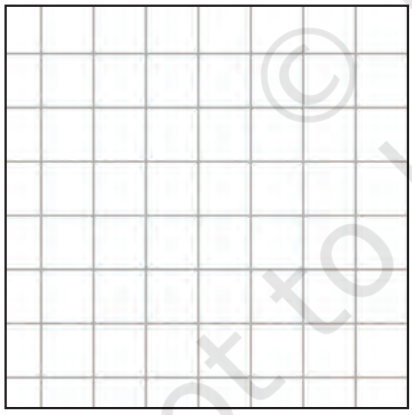
Tiles at the Tile Shop

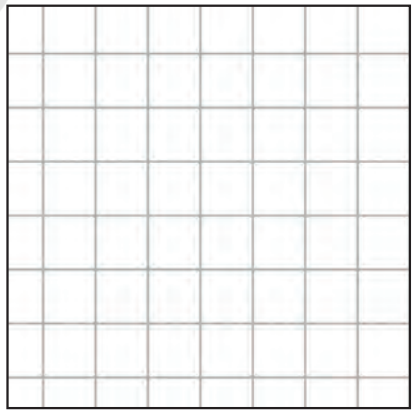
Bablu *Chacha* makes beautiful tiles of the kinds shown below. Design creative tiles of your own in the spaces given below. You may use a rangometry kit or shape cutouts.











1. Which shapes have you used to make the tiles?
2. Which of the tiles are symmetrical? Draw the lines of symmetry (if any).
3. Make more tiles by joining two or more shapes. Trace them in your notebook to create paths with no gaps or overlaps.

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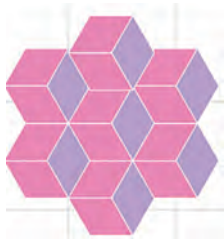
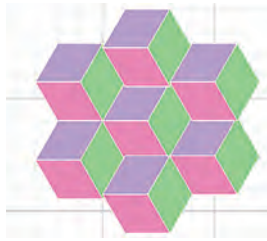
4. Look at the following shapes.
What do you notice? Discuss.

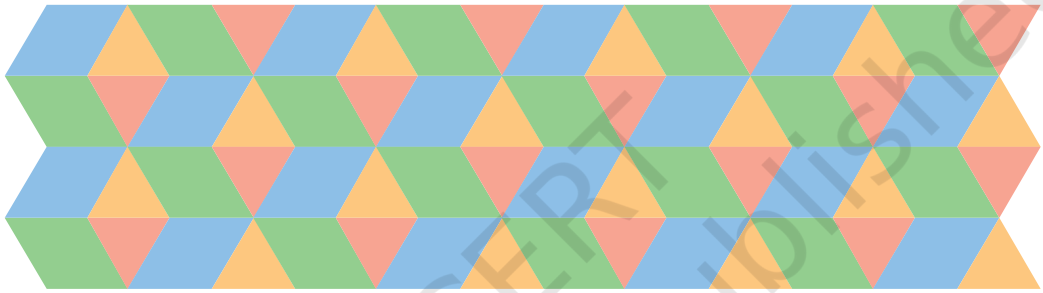




Let Us Do

1. Make floor patterns with your tile. Mini has made a floor pattern as shown below.

Remember there should be no overlaps and no gaps.



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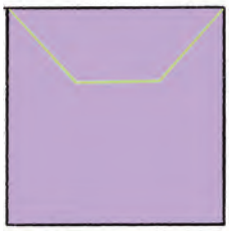
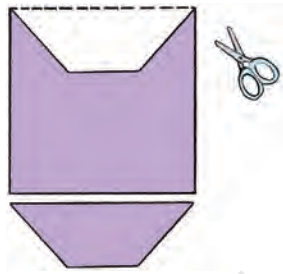
Note for Teachers: Encourage students to ask questions about the two designs. For example, how many shapes have been used? Would the design look the same if only one colour is used? Encourage children to create different designs using the same shapes with different colours.

2. Making a catty wall!

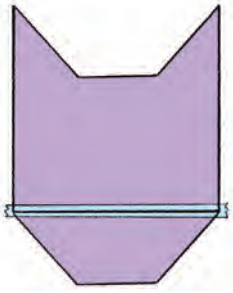
Step 1: Take a square piece of paper. Mark as shown to make the cat's head and ears.



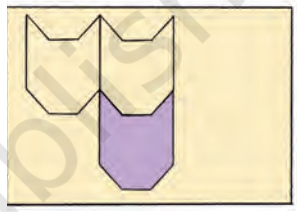
Step 2: Now, cut along the outline and slide the top piece down to align with the larger piece.



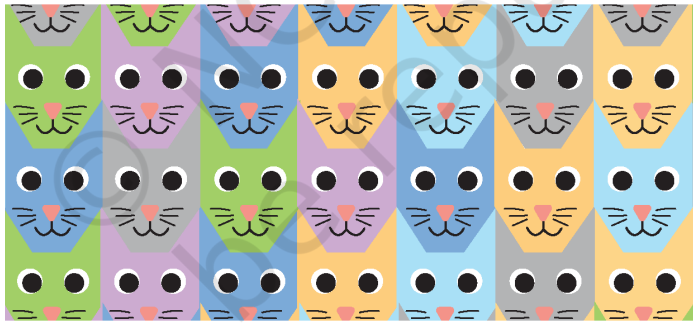
Step 3: Tape the pieces together.



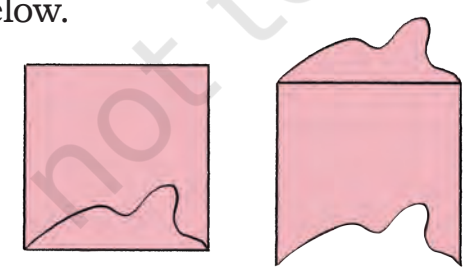
Step 4: Now the real fun begins! Trace the outline of the cat pattern on a large piece of paper and make its face.

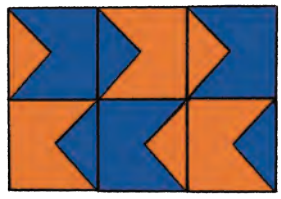


Your wall is ready.

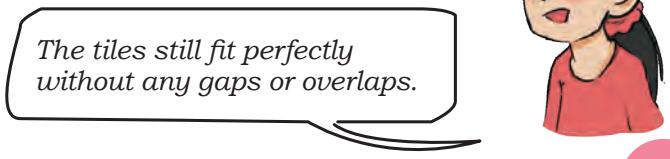


Create more of these tiles. Some ideas to make creative wall patterns are given below.





Isn't it fun? Just cut, slide, and paste. Your tile is ready to make a creative wall.



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3. Let us go on a nature walk (Project time)

Go for a nature walk to a nearby park or around your school with your teacher or your parents. Observe the patterns, designs, or symmetry around you carefully. Collect leaves, petals, and flowers that have fallen on the ground.

In your project file:

- Categorise the leaves into symmetrical and non-symmetrical.
- Make different designs and patterns with leaves and flowers.
- Make a greeting card using imprints of leaves or dry flowers.
- Create animals or designs using leaves and flowers.

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Chapter
12

Ticking Clocks and Turning Calendar

0433CH12

Parv is celebrating his birthday with his friends. Let us join them.

I was born on 29 February 2016. Years having the date 29 February are called leap years. Such years have one additional day in the year and occur every four years.

Let Us Do

1. Notice the number of days in February in the years 2024 and 2025.

FEB 2024						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29		

FEB 2025						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	

Number of days in Feb 2024 = _____

Number of days in Feb 2025 = _____

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2. Fill in the blanks with consecutive leap years before and after 2024.

   _____, _____, 2024, _____, _____, _____

3. We know that most years have 365 days. How many days would a leap year have?

4. Write the names of the months when you celebrate your favourite festivals.

Name of the Festival	Name of the Month

5. Answer the following questions by writing the appropriate days of the week:

   a) Today: _____

   b) Yesterday: _____

   c) Tomorrow: _____

   d) Day after tomorrow: _____

   e) Day before yesterday: _____

6. July 1 is a Monday. Write the dates for the next two Mondays.

   _____

7. Laali is born on 04/07/2014 and Chotu is born on 04/12/2019. Who is older among the two and how much?

   Laali will turn 5 years old on _____.

   Chotu's 10th birthday will be celebrated on _____.

Do You Know?

04/07/2024 is a date in DD/MM/YYYY format. And this is read as 4th of July 2024 or July 4, 2024.

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8. Check the manufacturing and expiry dates on the wrapper of any biscuit packet.

   a) How old is the packet of biscuits?

      Answer: ____ months ____ days.

   b) How many more days are the biscuits safe to eat?

      Answer: ____ months ____ days.

9. Notice the day on which July 15 falls in your calendar. Now find out what day is August 15? September 15? October 15? What pattern do you notice? Share in grade.

   Now choose a date and look up the day on which it falls. Challenge your friends to guess what day will the same date fall in the following month.

Let Us Explore

With the help of your parents and teachers, explore the names of the months in the Hindu/Islamic/Sikh or any other calendar of your community.

1. Find out when the year begins in each of these calendars.
2. Check how the names of the months in these calenders correspond to the months in the English calendar.
3. Identify the months from the Hindu/Islamic/Sikh or any other calendar in which some of the important festivals of the community fall.
4. Identify the dates of the new moon and full moon in your community's calendar every month. Do you notice any pattern?
5. How are the full moon or new moon days named in your community's calendar?

Note for Teacher: Students may be asked to collect wrappers of different items and make a table of expiry periods for them.

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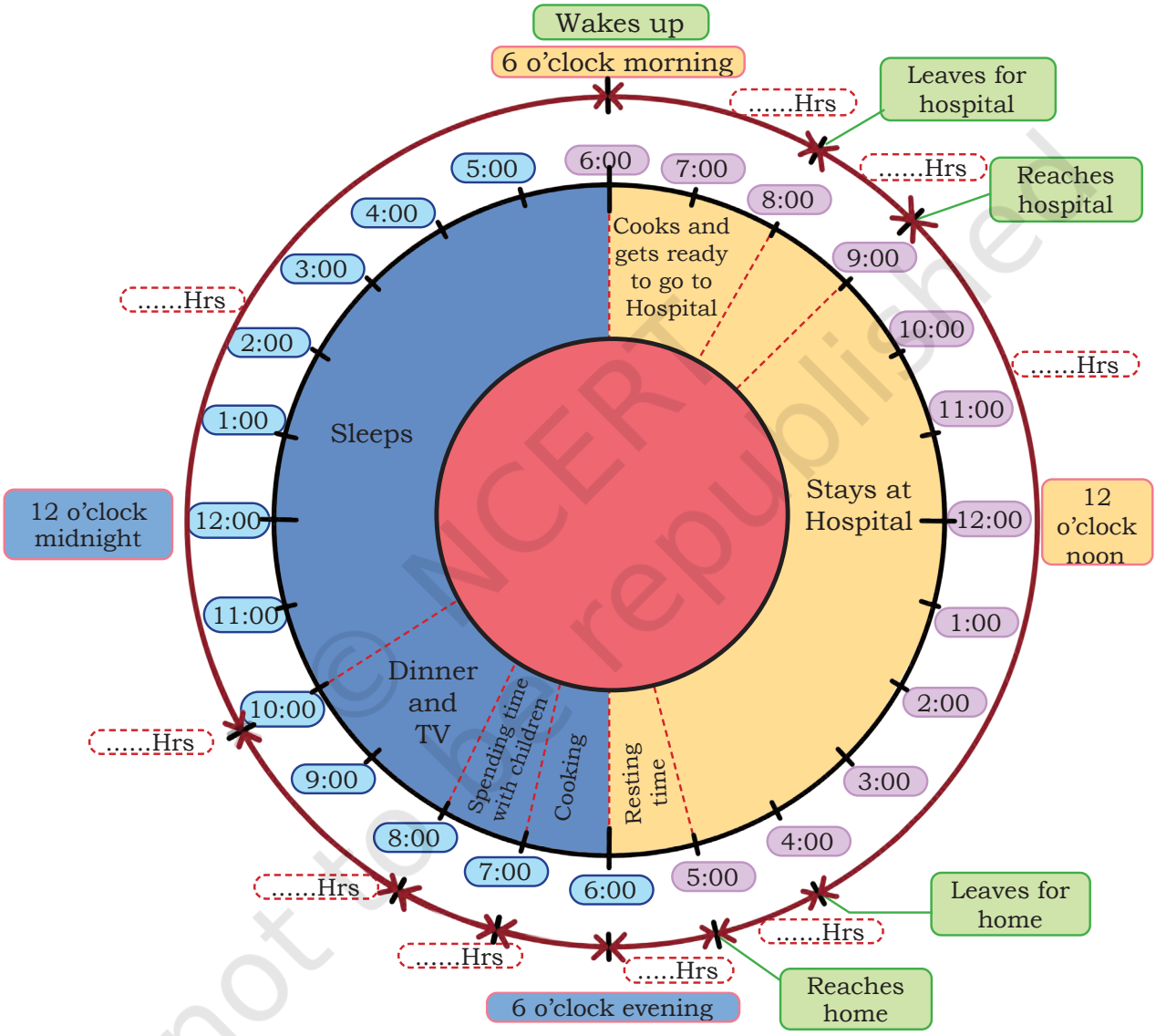
How many hours in a day?

Look at the picture below. It shows the time spent on different activities by a doctor. Write the number of hours spent on each activity in the space provided. Then, find the total number of hours between 6 o'clock morning to 6 o'clock evening and 6 o'clock morning of the next day.



The total number of hours is _____.

Note for Teachers: Help the children count the duration of the activities in the picture given above and find the total number of hours in a day.

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In both the pictures we see 8:00 on the clock. But one is morning and the other is night time. We add AM and PM to show this difference.

8:00 AM

8:00 PM

Digital clocks help us read the time more clearly.

Read the following table and see how we read and write time using AM/PM and the digital clock. Discuss what you notice about the two different ways.

Note for Teacher: Help children understand the difference between AM and PM and how it eases communication about time among people. You may seek children's routine experiences and associate them with AM and PM. You may draw their attention to the 24-hour clock and how it shows time and make children practice reading and writing it.

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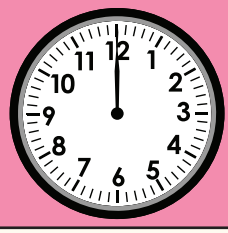
Fill in the blanks by writing time in the appropriate format.

Time in AM/PM 	Time in the digital clock
12:00 AM	00:00 hours
1:00 AM	1:00 hours
3:00 AM	3:00 hours
7:15 AM	7:15 hours
9:45 AM	_____ hours
_____	11:20 hours
12:00 PM	12:00 hours
1:00 PM	13:00 hours
3:00 PM	_____ hours
5:20 PM	_____ hours
_____	20:00 hours
11:45 PM	23:45 hours

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Hours and minutes

Raghav brings milk from the market every morning.

8:20

8:35

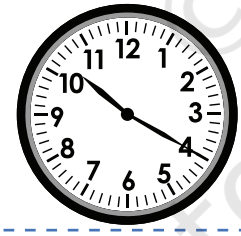
Raghav leaves home at 8:20 AM and returns back at 8:35 AM.

How much time has he taken? _____

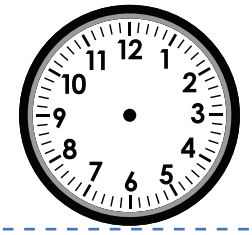
Let Us Do

1. Show the appropriate times on the clock as per instructions.

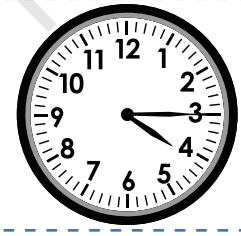
   a) Raghav started doing his homework at 10:20 AM. He took 25 minutes to finish it. Show the time that he finished his homework.



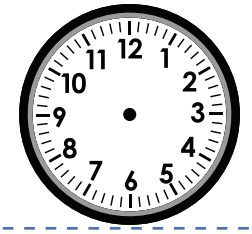
Time after 25 minutes



   b) Muneera starts reading a story at 4:15 PM. She finishes reading it in 45 minutes. Show the time that she finished reading the story.



Time after 45 minutes



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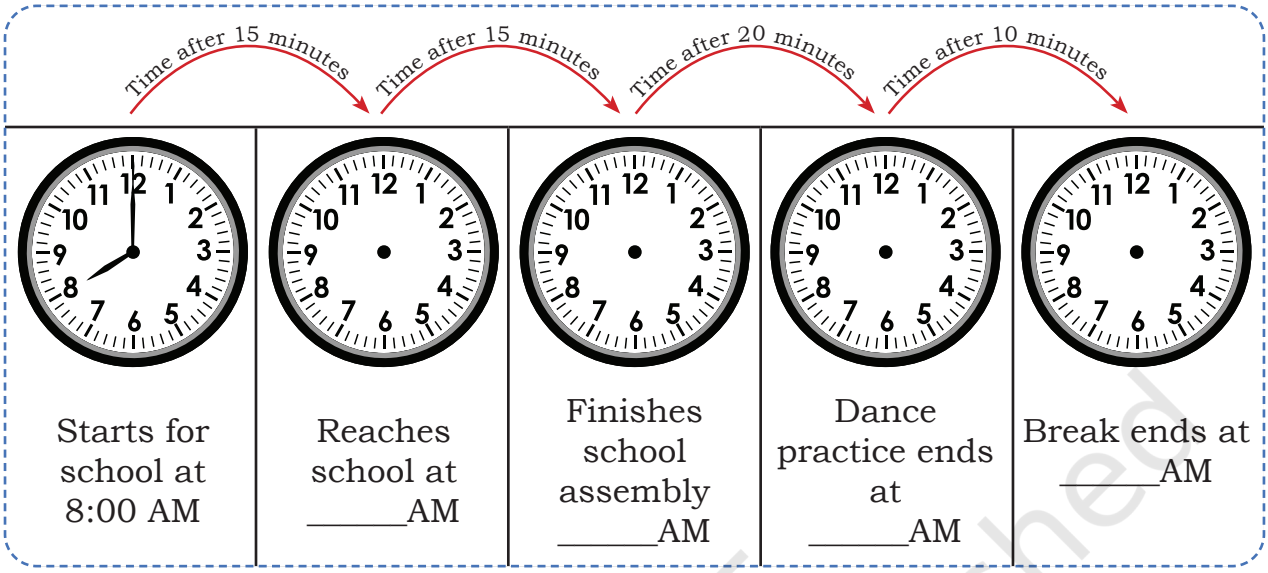
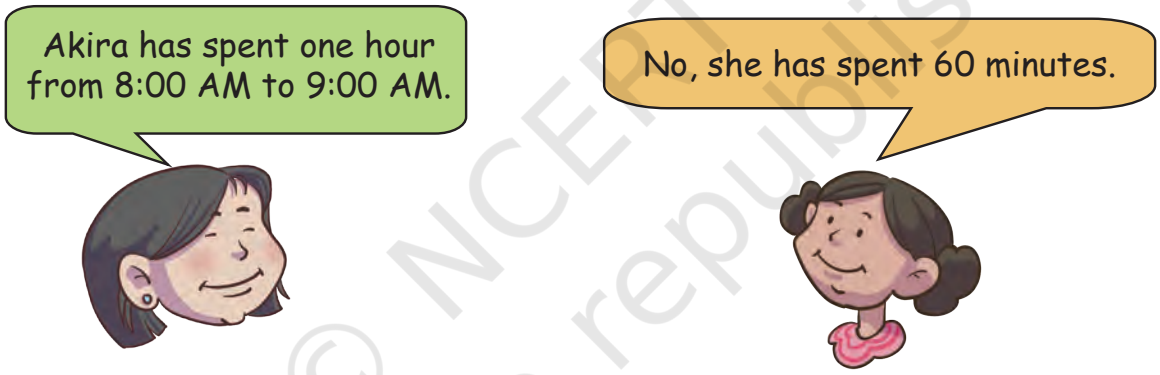
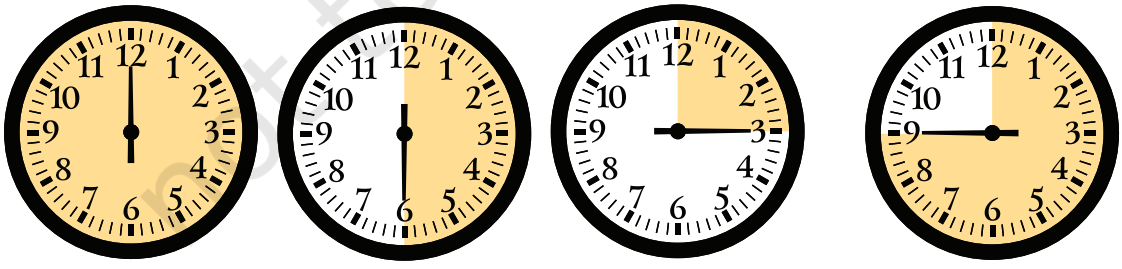
c) Akira leaves for school at 8:00 AM. She reaches school in 15 minutes.





Who do you think is correct? Is there any relation between 1 hour and 60 minutes?

Observe the shaded portions



One hour (1 hour) = 60 minutes

Half hour = ____ minutes

Quarter or $\frac{1}{4}$ of an hour= 15 minutes

Three Quarters or $\frac{3}{4}$ of an hour= ____ minutes

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Find out how much time you take to

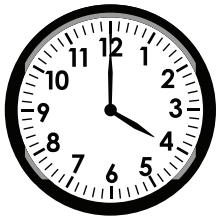
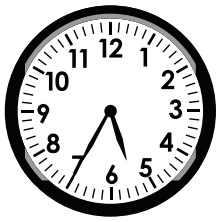
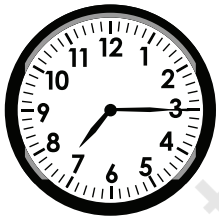
a) boil milk

b) fill water from tap in a bucket

What activities can you do in 5 minutes?

Let Us Check

Three friends read time from a clock. Who is right? Discuss the error and explain how one reads the clock correctly.

	Raghu	Raghav	Rani
	12:04	12:20	04:00
	07:07	07:25	05:35
	03:07	03:35	07:15

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Note for Teachers: Help children figure out the connection between a half hour, a quarter hour, 30 min and 15 min.

Chapter 13

The Transport Museum

0433CH13

Mystery Matrix

Fill the yellow boxes with 1-digit numbers (multiplicands and multipliers) such that you get the products given in the white boxes.

Fill the remaining white boxes with appropriate products.

×				
	32			
			42	
		45		
			21	

The product of the numbers in each row is given in the orange boxes. The product of the numbers in each column is given in the blue boxes. Identify appropriate numbers to fill the blank boxes.

		56
		54
63	48	

		42
		50
60	35	

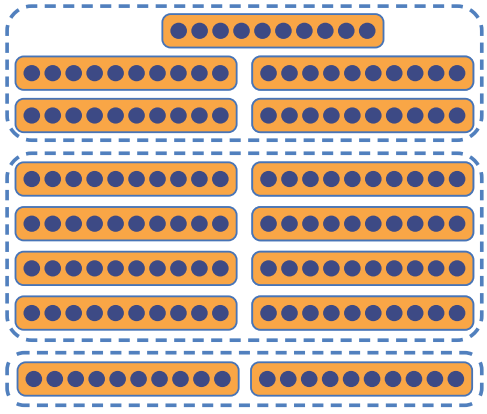
Times-10

Match each problem with the appropriate pictorial representation and write the answer.

2 × 10 = 2 Tens = _____

5 × 10 = _____ Tens = _____

8 × 10 = _____ Tens = _____



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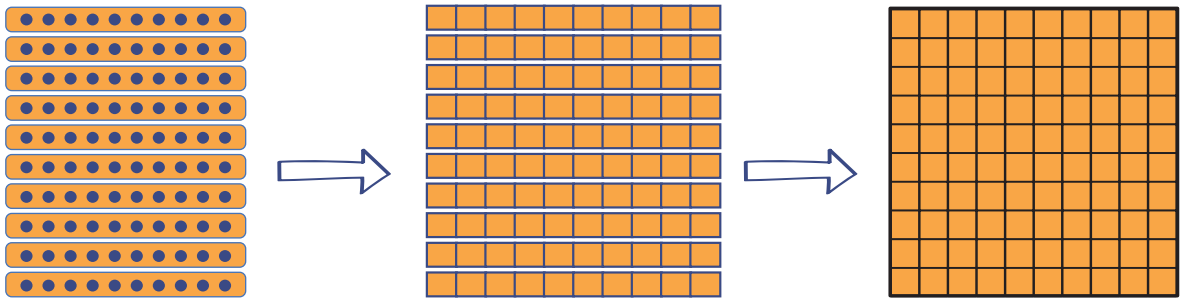
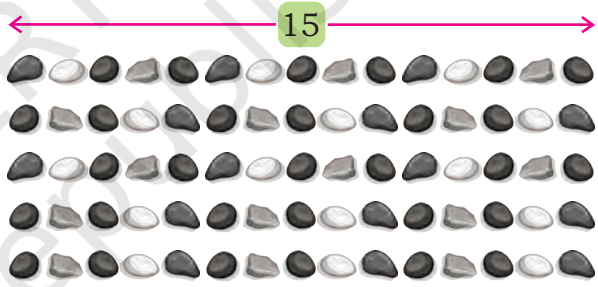


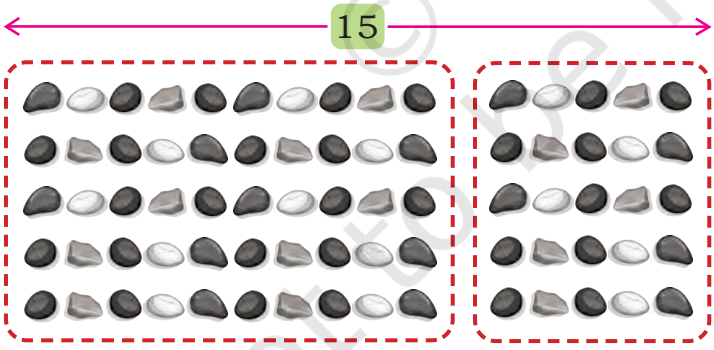
10 Tens | 10 Tens | 1 Hundred =100

What is 10 × 10 = ____ Tens = _____

Constructing Tables

How many pebbles are there in this arrangement? _____





This is a 5 × 15 arrangement. There is an easy way to find this product by splitting the arrangement.

5 × 15 = 5 × 10 and 5 × 5

= _____ + _____ = _____

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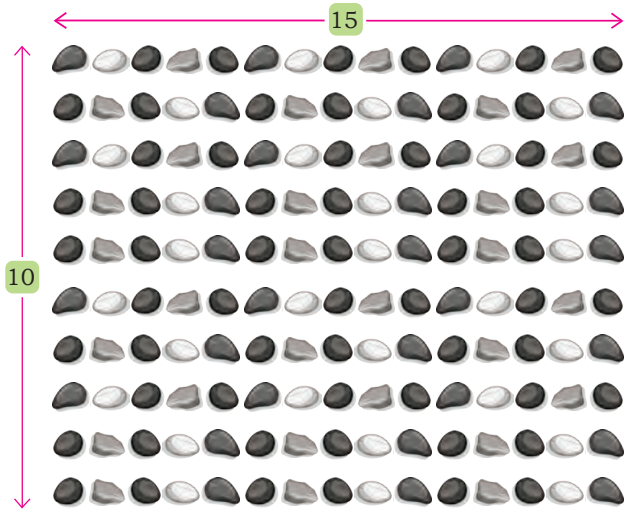
Recall the times-tables that we created in Grade 3. Now construct a times-15 table. You may use the arrangement given below and split the columns into 10 and 5 for ease of counting, as shown on the previous page.

How can we find 1 ×15, 2 ×15, ... with this?



1 × 15 = ___	6 × 15 = ___
2 × 15 = ___	7 × 15 = ___
3 × 15 = ___	8 × 15 = ___
4 × 15 = ___	9 × 15 = ___
5 × 15 = ___	10 × 15 = ___

1. What patterns do you see in this table?
2. Compare the times-15 table with the times-5 table. What similarities and differences do you notice?

What times-table is this? ____ How did we get this?

Times - 5	Times - 15
1 × 5 = 5	1 × 15 = 15
2 × 5 = 10	2 × 15 = 30
3 × 5 = 15	3 × 15 = 45
4 × 5 = ___	4 × 15 = ___
5 × 5 = ___	5 × 15 = ___
6 × 5 = ___	6 × 15 = ___
7 × 5 = ___	7 × 15 = ___
8 × 5 = ___	8 × 15 = ___
9 × 5 = ___	9 × 15 = ___
10 × 5 = ___	10 × 15 = ___

15 – 5 = 10

30 – 10 = 20

45 – 15 = 30

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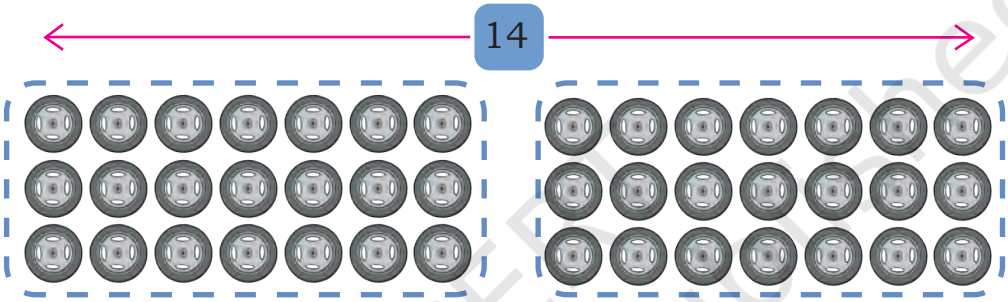
3. Construct other times-tables for numbers from 11 to 20, as you did for 15.
4. As you compared the times-5 table with the times-15 table, compare the times-1 table with the times-11 table, the times-2 table with the times-12 table, and so on. Share your observations.

Making tables by splitting into equal groups

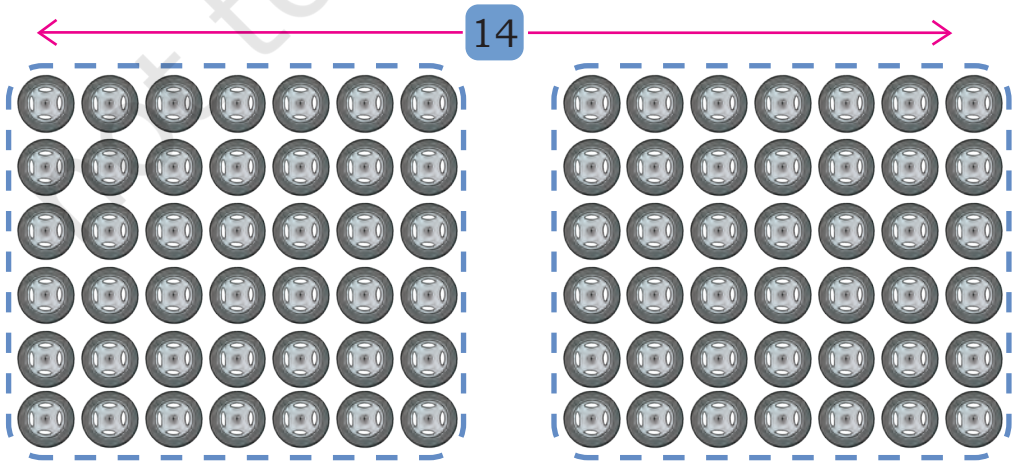
Here is an arrangement of wheels. To count the total number of wheels, Tara splits them into two equal groups.



$3 \times 14 = 3 \times 7$ and 3×7
$= 21 + 21$ = double of 21
$= 42$

Similarly, 6×14 can be obtained by splitting the arrangement into two equal groups.

6 × 14 = Double of 6 × 7
Why?



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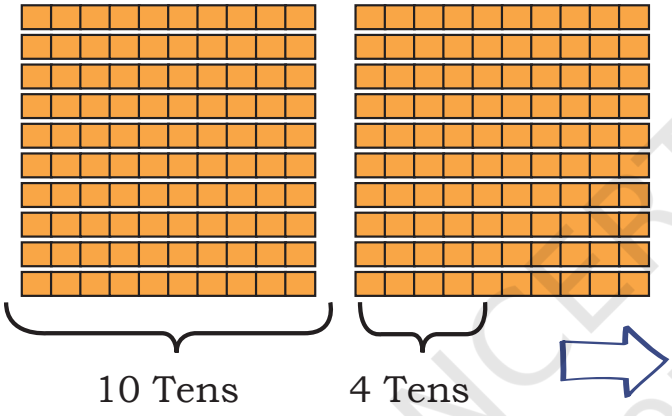
$6 \times 14 = 6 \times 7$ and 6×7
$= 42 + 42$ = double of 42
$= 84$

We have seen how to calculate 3×14 and 6×14 by splitting and doubling. Can we construct the times-14 table by splitting and doubling? Try!

What other times-tables can be constructed by splitting into equal groups and doubling? Give examples.

Multiples of 10



$14 \times 10 = 14$ Tens
$= 10$ Tens $+ 4$ Tens
$= 100 + 40$
$= 140$

Find the answers to the following:

a) $15 \times 10 =$ _____ Tens = _____

b) $16 \times 10 =$ _____ Tens = _____

c) $19 \times 10=$ _____ Tens = _____

d) $20 \times 10 =$ _____ Tens = _____

$10 \times 10 =$ ____
2 times (i.e., double of) $10 \times 10 =$ ____

Discuss in grade what happens when we take several groups of 10.

Note for Teachers: Support the learners in understanding multiplication when group size is a multiple of 10. Language of 'tens' is a useful way to think about this.

For example: 16×10 = 16 Tens is 160

$16 \times 20 = 16 \times 2$ Tens = 32 Tens = 320

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Now think and answer the following problems.

30 × 10 = _____ 40 × 10 = _____ 70 × 10 = _____

50 × 10 = _____ 60 × 10 = _____ 80 × 10 = _____

Let us find the number of people who can travel in 26 tempo travellers.
26 × 10 = _____ travellers.

26 × 10 = 26 Tens = 20 Tens + 6 Tens = 200 + 60 = 260

Answer the following questions. Share your thoughts.

a) 21 × 10 = _____

b) 42 × 10 = _____

c) 65 × 10 = _____

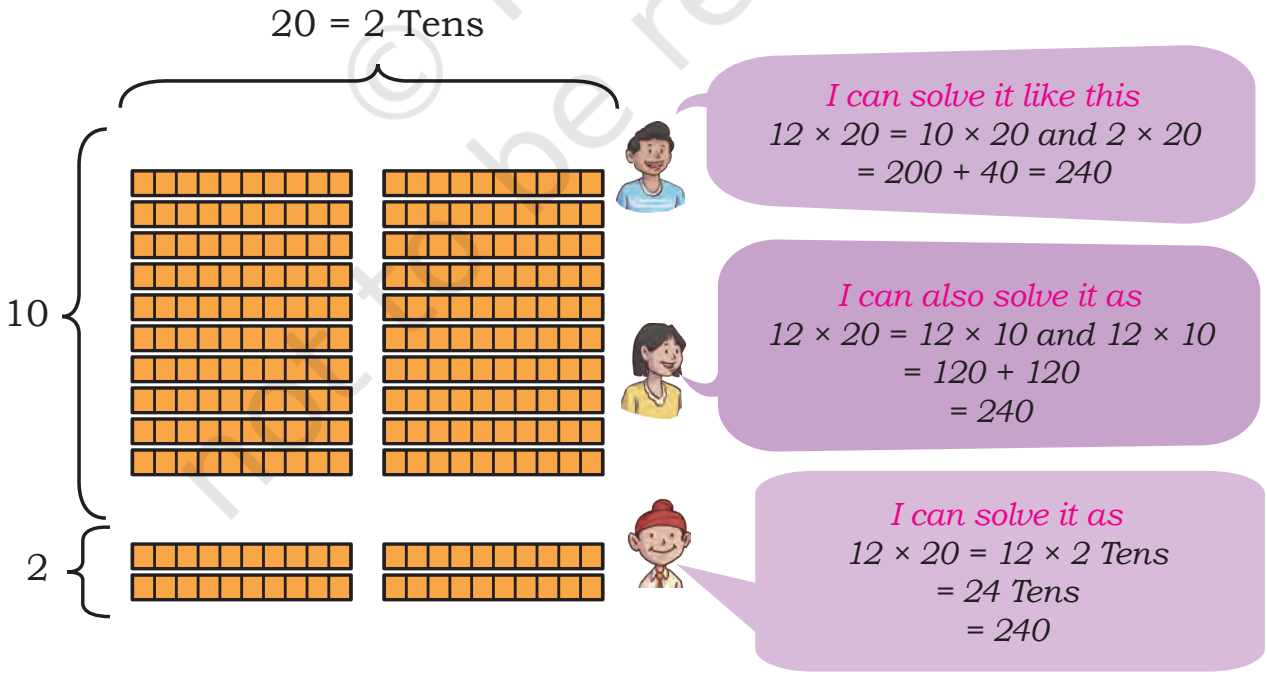
d) 38 × 10 = _____

e) 53 × 10 = _____

f) 87 × 10 = _____

A small bus can seat 20 people. How many people can be seated in 12 buses?

Now let us do 12 × 20.



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Solve the following problems. Share your thoughts.

24 × 40 = _____

50 × 60 = _____

13 × 30 = _____

43 × 60 = _____

70 × 80 = _____

A Day at the Transport Museum

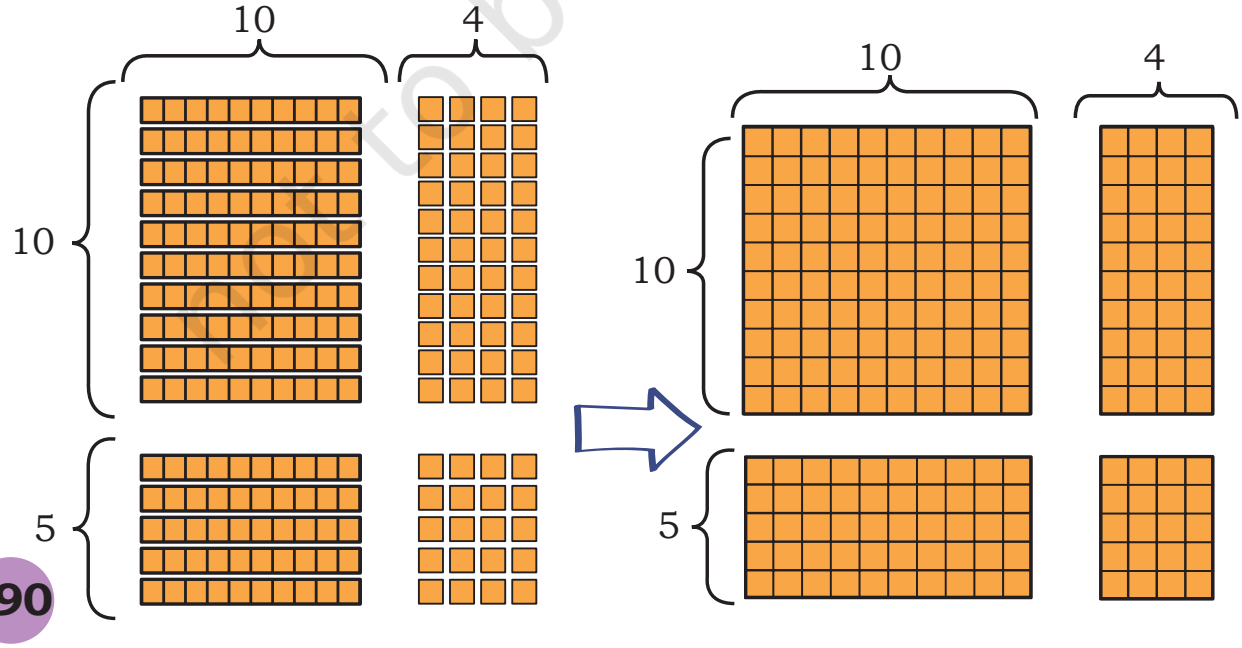
Amala, Raahi and Farzan are visiting the "Transport Museum".

This museum has a collection of different modes of transport used by people in India. It includes several vehicles from the olden days.

Raahi spots a toy train. She figures out that each coach can seat 14 children. The toy train has 15 coaches.

How many children can be seated in the toy train?

We have to find 15 × 14.



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×	10	4
10	10 × 10 = 100	10 × 4 = 40
5	5 × 10 = 50	5 × 4 = 20
	150	60
		210

15 × 14 = 100 + 40 + 50 + 20
= 210
In 15 coaches, 210 children can be seated.

She wonders how many coaches will be needed for the 324 children from her school. Remember, each coach can seat only 14 children.

We have to find 324 ÷ 14

No. of children	No. of coaches needed	No. of children remaining
		324
140	10	324 – 140 = 184
140	10	184 – 140 = 44
14	1	44 – 14 = 30
28	2	2

14) 324 (10+10+1+2
−140
184
−140
44
−14
30
−28
2

Total no. of coaches = _____

What do we do with the remaining 2 children? Discuss in grade.

Such remaining number in a division problem is called 'remainder'.

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Let Us Solve

Also, identify remainder (if any) in the division problems.

a) 25 × 34
b) 16 × 43
c) 68 × 12
d) 39 × 13
e) 125 ÷ 15
f) 94 ÷ 11
g) 440 ÷ 22
h) 508 ÷ 18

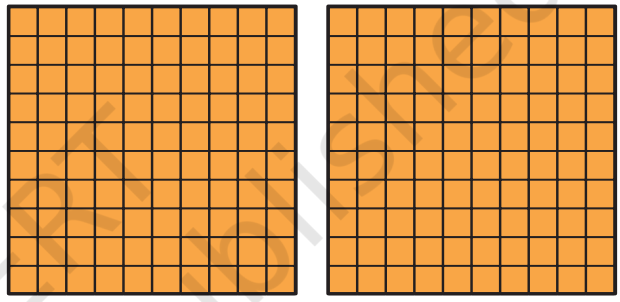
Multiples of 100

2 × 100 = 2 Hundreds = 200

3 × 100 = _____ Hundreds = _____

5 × 100 = _____ = _____

8 × 100 = _____ = _____



10 × 100 = 10 Hundreds = 1000

What happens when we put 10 Hundreds together?

11 × 100 = 11 Hundreds

= 10 Hundreds + 1 Hundred

= 1000+ 100 = 1100

12 × 100 = _____

15 × 100 = _____

20 × 100 = 20 Hundreds = 2000

27 × 100 = _____

70 × 100 = _____

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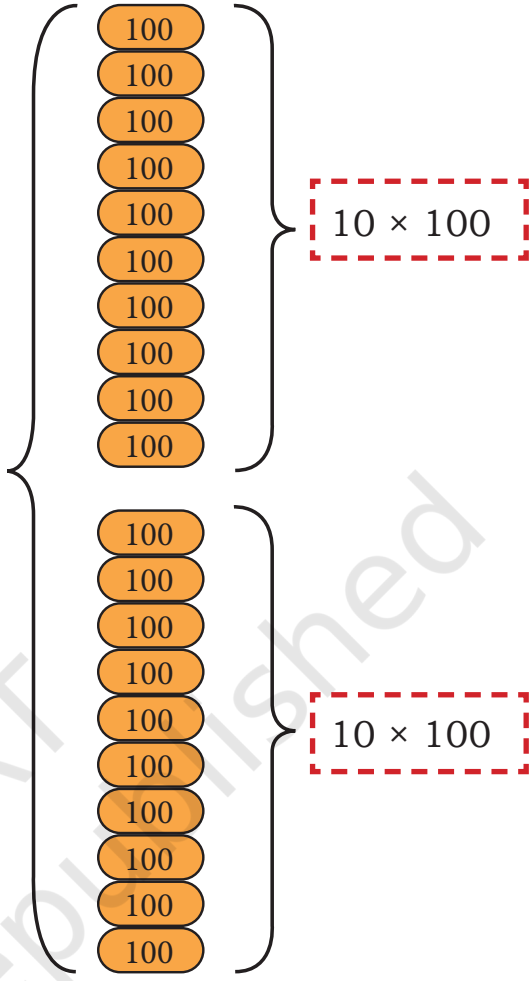
20 × 100 is
10 × 100 and 10 × 100

10 × 100 is 1000.
So, 20 × 100 is
2 × 1000 = 2000



Now answer the following questions. Share your thoughts.

30 × 100 = _____

40 × 100 = _____

50 × 100 = _____

24 × 100 = _____

53 × 100 = _____

19 × 100 = _____

We Know

80 × 100 = 8000

Find

80 × 50 = _____

40 × 50 = _____

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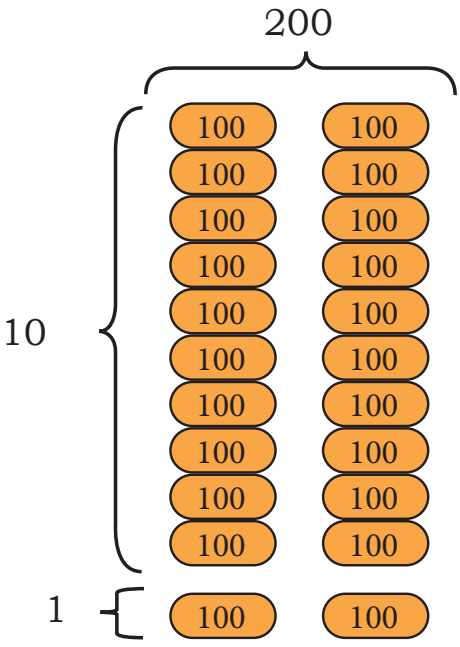
Let us find **11 × 200**



11 × 200 = 10 × 200 and 1 × 200
= 2000 + 200 = 2200

11 × 200 = 11 × 100 and 11 × 100
= 1100 + 1100
= 2200

11 × 200 = 11 × 2 Hundreds
= 22 Hundreds
= 2200

Share what you notice about the answers to these problems.

What do you notice about any number times-100s

11 × 100 = _____ 22 × 100 = _____

11 × 200 = _____ 22 × 200 = _____

Answer the following questions. Share your thoughts.

18 × 100 = _____ 5 × 500 = _____

15 × 200 = _____ 14 × 300 = _____

23 × 200 = _____ 7 × 800 = _____

Note for Teachers: Encourage students to understand the multiplication of a number times-100 by splitting the number of groups in suitable ways. For example, 18 × 100 = 18 Hundreds = 10 Hundreds and 8 Hundreds, that is, 1800. Also, children should be encouraged to see relationships in the answers to two different multiplication problems like the ones above, for example, changing the group size from 100 to 200 or changing the number of groups from 11 to 22.

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Find the answers in Set A. Examine the relationships between the problems and the answers in Set A carefully. Then use this understanding to find the answers in Set B.

A

14 × 100 = _____	14 × 10 = _____	14 × 1 = _____
14 × 500 = _____	14 × 50 = _____	14 × 5 = _____
7 × 500 = _____	7 × 50 = _____	7 × 5 = _____
7 × 250 = _____	7 × 25 = _____	7 × 10 = _____

B

30 × 100 = _____	30 × 10 = _____	30 × 1 = _____
30 × 200 = _____	30 × 20 = _____	30 × 2 = _____
15 × 100 = _____	15 × 10 = _____	15 × 1 = _____
15 × 200 = _____	15 × 20 = _____	15 × 2 = _____

C

Answer the following questions

1) 44 × 10 = _____

22 × 20 = _____

2) 16 × 100 = _____

4 × 400 = _____

Amala is fascinated to read this information in the aeroplane section of the transport museum.

"During the COVID-19 pandemic, the Indian Government undertook a massive evacuation of Indians living outside the country, under a mission called Vande Bharat. In the first week, 64 flights carried 152 people each."

Note for Teachers: Encourage students to understand the patterns in the above problems. Relationships between doubles and halves and multiplication by 10s and 100s should be pointed out.

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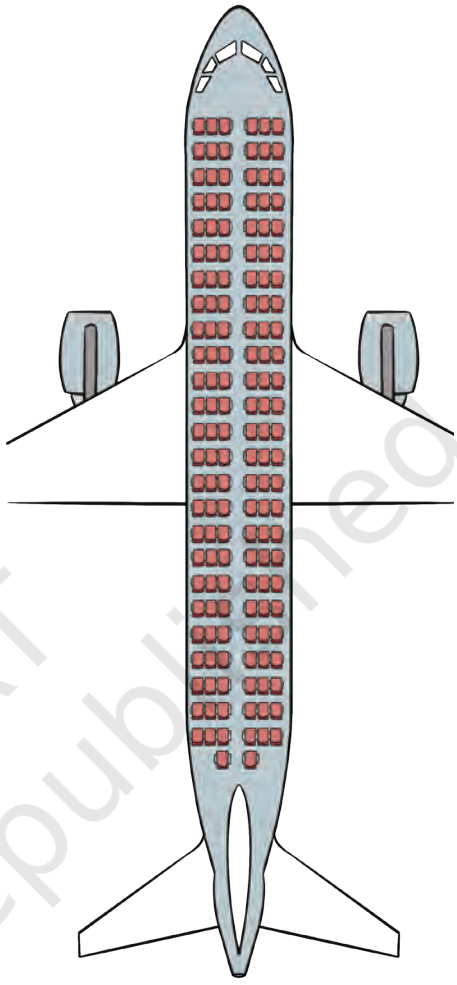
Amala wonders how many people travelled the first week of this 'Vande Bharat Mission'.

Help her find the answer.

64 × 152

	100	50	2
60	60 × 100 = 6000	60 × 50 = 3000	60 × 2 =120
4	4 × 100 = 400	4 × 50 = 200	4 × 2 = 8



×	100	50	2
60	6000	3000	120
4	400	200	8
	6400	3200	128
			9728

Farzan notices the famous snake boat from Kerela.

The technique for making these boats is 800 years old. Vallam kali (the snake-boat race) is held during the monsoon season between July and September and concludes with Onam, the harvest festival. These boats are 30 to 35 metres long and can be peddled by 64–128 people.

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In a particular race, 960 participants volunteered. Each boat is pedalled by 64 people. How many boats will be needed?

We have to find **960 ÷ 64**

No. of boats	No. of participants	No. of people remaining
		960
10	640	320
5	320	0

64) 960 (10 + 5
−640
320
−320
0

Total no. of boats: 15

Let Us Solve

Also, identify remainder (if any) in the division problems.

a) 237 × 28
b) 140 × 16
c) 389 × 57
d) 807 ÷ 24
e) 692 ÷ 33
f) 996 ÷ 45

Dividing by 10 and 100

A farmer packs his rice in sacks of 10 kg each.

a) If he has 60 kg of rice, how many sacks does he need?
b) If he has 600 kg of rice, how many sacks does he need?

If a sack of rice weighs 100 kg then how many sacks does he need for 600 kg of rice?_____

60 ÷ 10 = _____
600 ÷ 10 = _____
600 ÷ 100 = _____

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Find the answers to the following questions. Share your thoughts in grade.

40 ÷ 10 = ____	4 ÷ 2 = ____	400 ÷ 2 = ____
400 ÷ 10 = ____	40 ÷ 20 = ____	400 ÷ 20 = ____
400 ÷ 100 = ____	400 ÷ 200 = ____	400 ÷ 200 = ____

Think and answer. Write the division statement in each case.

1. Manku the monkey sees 870 bananas in the market. Each bunch has 10 bananas. How many bunches are there in the market? _____

2. Rukhma Bi wants to distribute ₹1000/- equally among her 10 grandchildren on the occasion of Eid.
   How much money will each of them get? _____

Let Us Solve

1. The oldest long-distance train of the Indian Railways is the Punjab Mail which ran between Mumbai and Peshawar. Its first journey was on 12 October 1912. Do you know how many coaches it had on its first journey? It had 6 coaches: 3 carrying 96 passengers and 3 for goods.

   a) How many people travelled in each coach on the first journey?

   b) This train has been running for 106 years now. It runs between Mumbai, Maharashtra and Ferozepur, Punjab. It has 24 coaches. Each coach can carry 72 passengers. How many people can travel on this train?

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2. Amala and her 35 classmates, along with 6 teachers, are going on a school trip to Goa. They are using the double-decker "hop on hop off" sightseeing bus to explore the city.

a) 2 people can sit on every seat of the bus. There are 15 seats in the lower deck and 10 in the upper deck. How many seats will they need to occupy? Are there enough seats for everyone?

b) Find the total cost of the tickets for all children.

c) What is the cost of the tickets for all teachers?

Ticket price

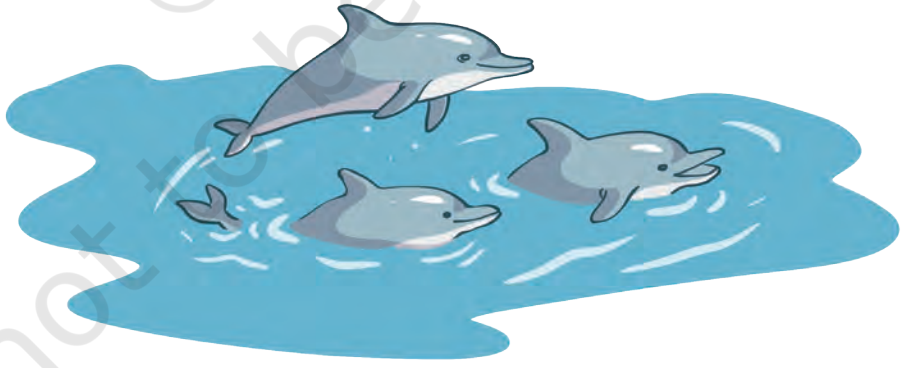
Adult	- ₹899/-
Children	- ₹359/-

3. Kedar works in a brick kiln.

a) The kiln makes 125 bricks in a day. How many bricks can be made in a month?

b) Each brick is sold in the market for ₹ 9. How much money can they earn in a month?

4. Chilika lake in Odisha is the largest saltwater lake in India. It is famous for the Irrawaddy dolphins. Boats can be hired to go see the dolphins. The trip from Puri includes a bus ride followed by a boat ride. Eight people will be going on the trip.



- A bus ticket from Puri to Satapada costs ₹ 60.
- A two-hour boat ride for 8 people costs ₹ 1200.
- How much money do we need to spend on each person?

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5. Find the multiplication and division sentences below. Shade the sentences. How many can you find? Some are done for you.

134	52	30	31	931	10	93	55
5	20	15	15	250	3	33	101
22	1040	450	0	4	26	104	5555
110	100	50	20	1000	60	16	99
44	104	19	3	6	22	132	7
20	6	950	6	6000	30	200	693
808	624	31	14	1200	8	16	24
35	9	525	5	105	62	3200	78

250 × 4 = 1000

50 × 20 = 1000

525 ÷ 5 = 105

_____

_____

_____

_____

_____

_____

6. Solve

a) 35 × 76

b) 267 × 38

c) 498 × 9

d) 89 × 42

e) 55 × 23

f) 345 × 17

g) 66 × 22

h) 704 × 11

i) 319 × 26

j) 459 ÷ 3

k) 774 ÷ 18

l) 864 ÷ 26

m) 304 ÷ 12

n) 670 ÷ 9

o) 584 ÷ 25

p) 900 ÷ 15

q) 658 ÷ 32

r) 974 ÷ 9

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Chinnu's Coins

1. Five friends plan to visit an amusement park nearby. Each of them uses different notes and coins to buy the ticket. The cost of the ticket is ₹ 750.

- Bujji has brought all notes of ₹ 200.
- And Munna has brought all notes of ₹ 50.
- Whereas Balu has brought all notes of ₹ 20.
- And guess what, Chinnu has all coins of ₹ 5.
- And Sansu has all coins of ₹ 2.

a) Find out how many notes/coins each child has to bring to buy the ticket.

b) Which of these children will not receive any change from the cashier?

c) How long would the cashier take to count Chinnu's coins?

2. Observe the following multiplications. The answers have been provided.

12	11	13	11
× 13	× 14	× 13	× 12
156	154	169	132

In each case, do you see any pattern in the two numbers and their product? (Hint: Look at the coloured digits!)

For what other multiplication problems will this pattern hold?

Find 5 such examples.

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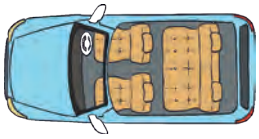
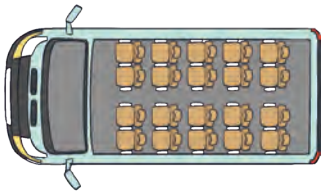
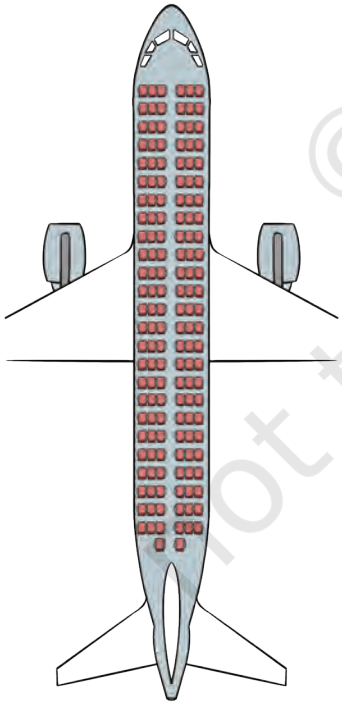
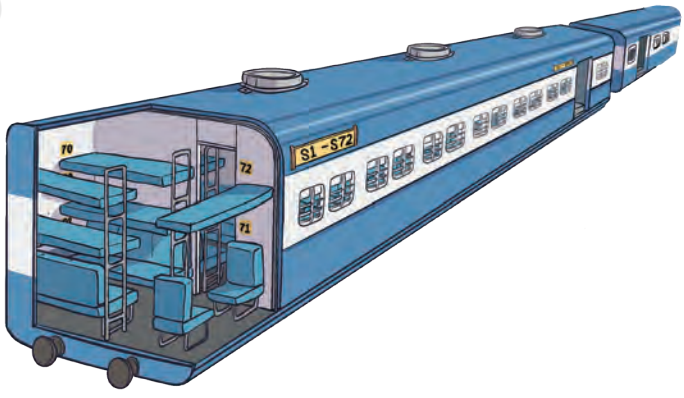
3. Assume each vehicle is travelling with full capacity. How many people can travel in each of these vehicles? Match them up.







75 Cycles	400
52 Autos	75
103 Cars	4560
20 Minibus	156
30 Aeroplanes	864
15 Train sleeper coaches	412



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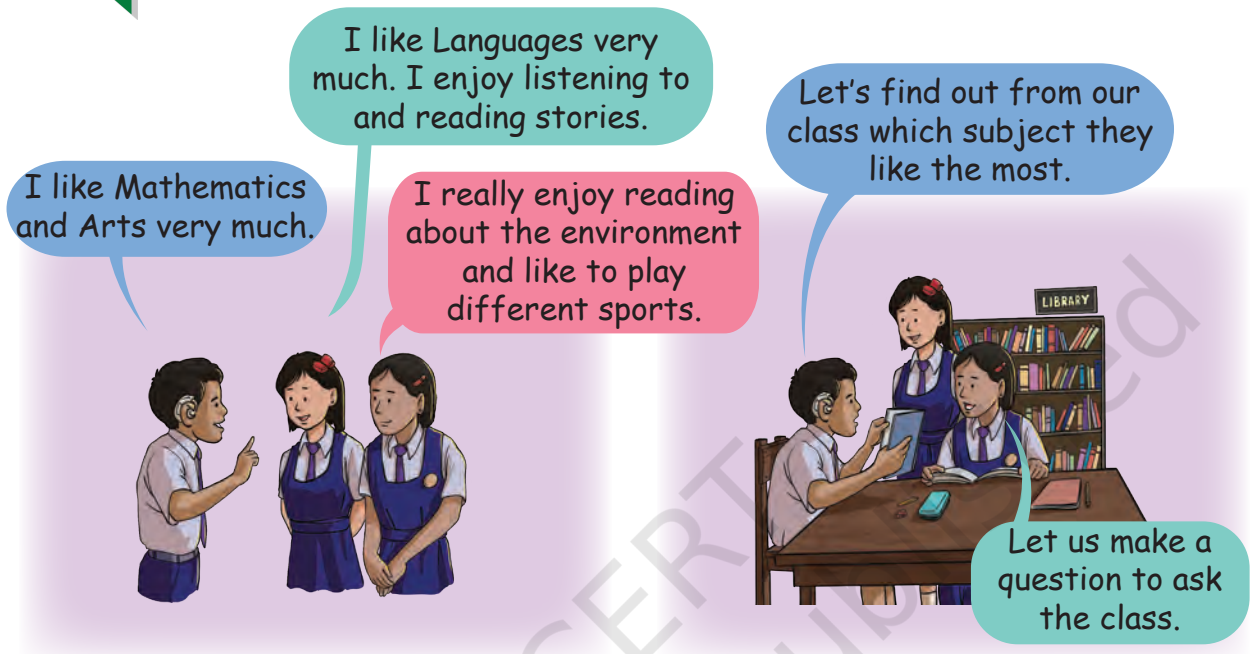
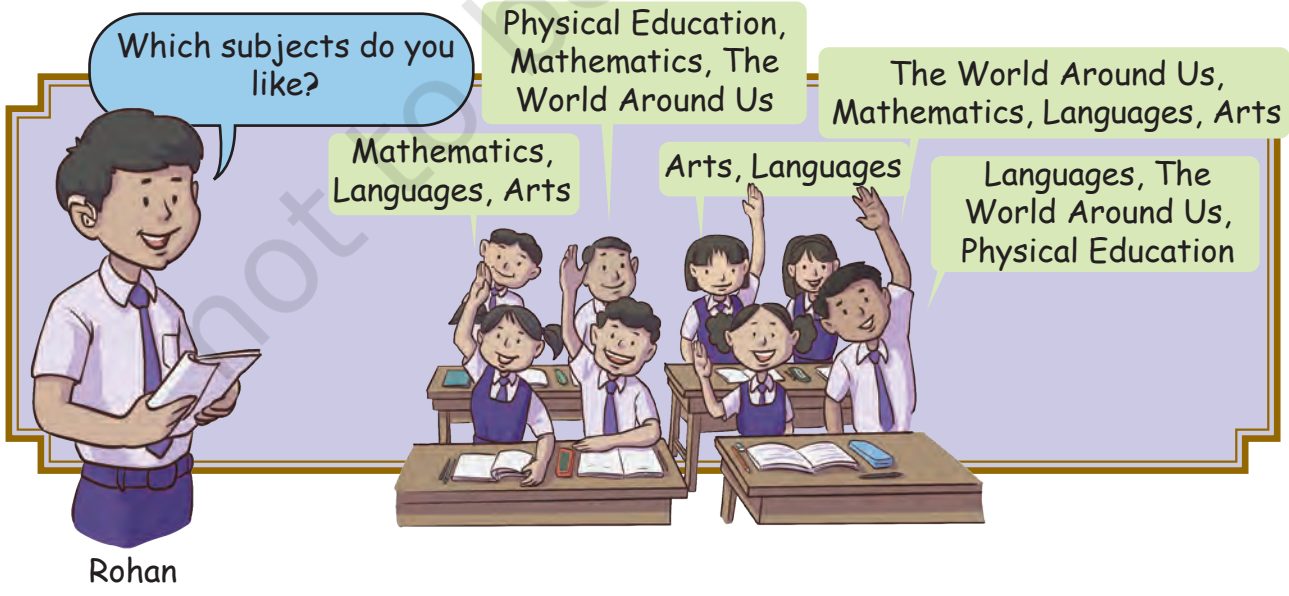
Chapter
14

Data Handling



Look at the questions asked by Rohan and Anjali.

Tick the question that is the most appropriate for finding the 'most liked subject'? Why do you think so? Discuss with your friends and teacher.



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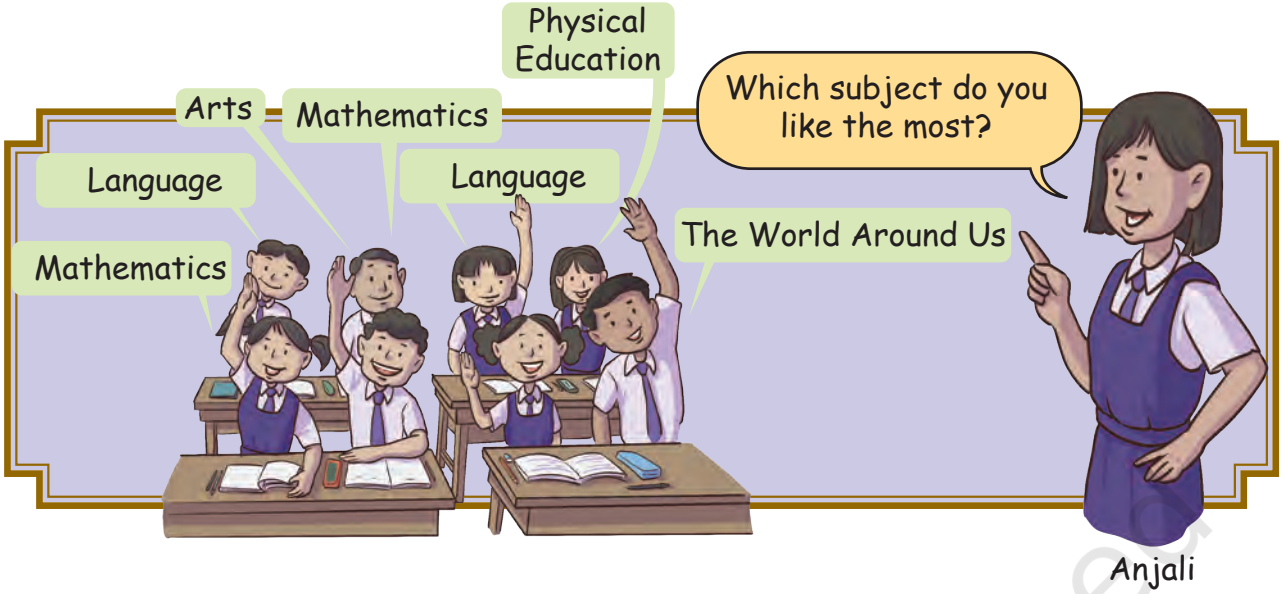
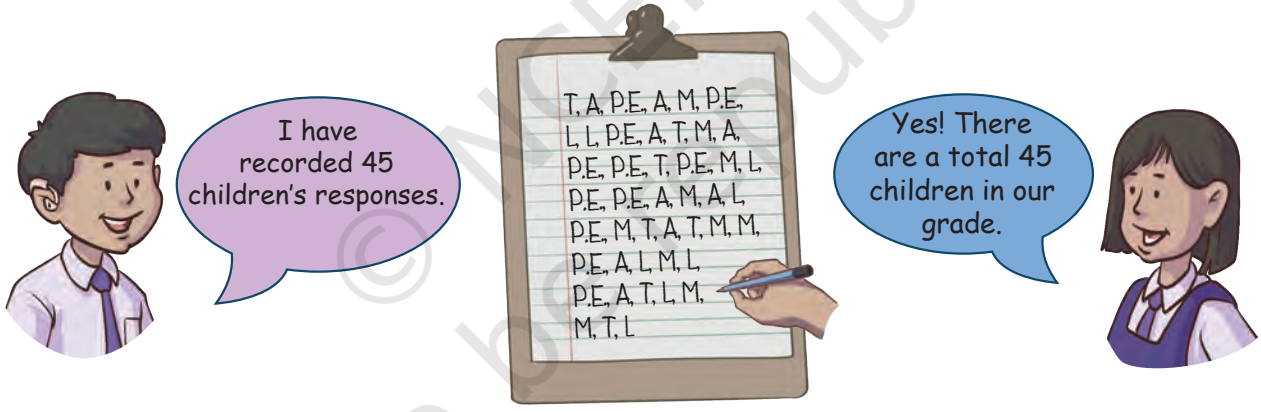


Anjali and Rohan recorded the children's answers (responses) to the above question as follows:

They wrote M for Mathematics, L for Languages, T for The World Around Us, A for Arts and P.E. for Physical Education.



Look at the children's responses above and answer the following questions:

- The number of children who like Mathematics the most is _____ .
- The number of children who like Language the most is _____ .
- The number of children who like The World Around Us the most is _____ .
- The number of children who like Physical Eduation the most is _____ .
- The number of children who like Arts the most is _____ .

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Let's fill the above information in this table.

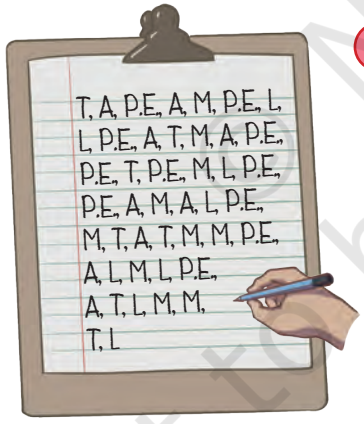
Subjects	No. of Children
Mathematics (M)	_____
Languages (L)	_____
The World Around Us (T)	_____
Physical Education (P.E.)	_____
Arts (A)	_____

Now look at the above table and answer the following questions:

- What is the most common favourite subject among the children?
  _____
- What is the least common favourite subject among the children?
  _____

There are the following two ways to display the information.

1



2

Subjects	No. of Children
Mathematics (M)	_____
Languages (L)	_____
The World Around Us (T)	_____
Physical Education (P.E.)	_____
Arts (A)	_____

Which way of displaying information is easier to understand and why?
_____

Note for Teachers: Discuss how a question needs to be framed and what words should be used.

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Reprint 2026-27

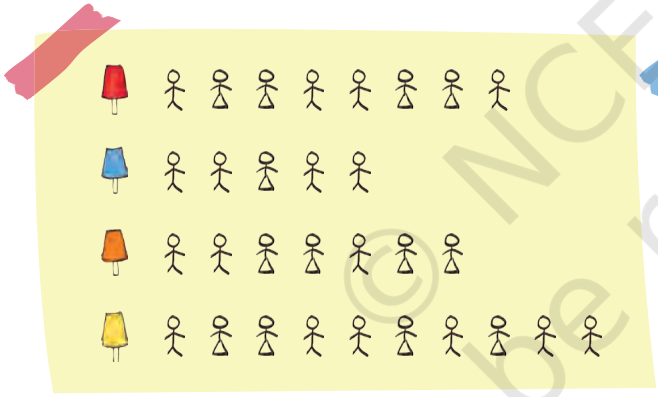
Colourful Golas

During school lunch break children rush to eat *gola* of their favourite colour.

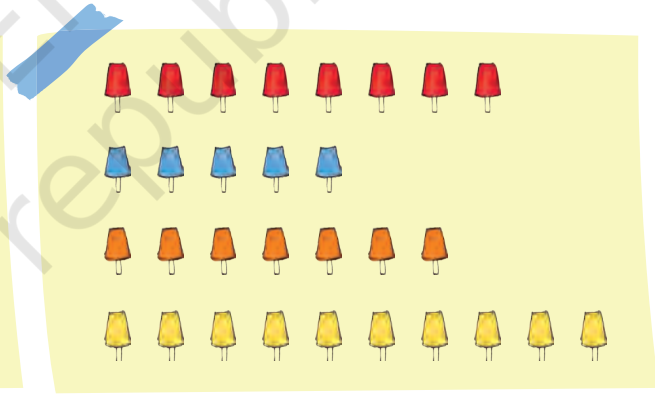
Rohan and Anjali record the *golas* eaten by different children. They want to eat the one that is most eaten by others.

They both start recording the *golas* eaten by the children.

Rohan



Anjali



Look at the information given above. Colour the line drawing of the golas appropriately.

1. Which colour ice *gola* do the children eat:

   a) the most

   b) the least

   How do you know?

2. Which colour *gola* would Anjali and Rohan have bought?

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3. Which colour *golas did* boys eat the most?

4. Which colour *golas did* girls eat the most?

5. Which of the ways of representing data did you use to answer these questions and why?

Activity — Chess or Cricket

Find out from your classmates how many of them play only chess, only cricket, both or neither.

Now let us organise the above data in the table.

Nature of Games	No. of Girls	No. of Boys
Chess but not Cricket		
Cricket but not Chess		
Both		
Neither		

Answer these questions based on the data collected from your grade.

1. Who plays Chess the most? _____ (Boys/Girls)
2. Who plays Cricket the most? _____ (Boys/Girls)
3. How many children play both types of games? _____

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Reprint 2026-27

Bal Mela

Anjali and Rohan have recorded the number of people who ate fruit chaats and sandwiches in the Bal Mela over three days, using a Pictograph.

Anjali: Fruit Chaat

Days	Total Fruit Chaats
Day 1	
Day 2	
Day 3	

Rohan: Sandwiches

Days	Total Sandwiches
Day 1	
Day 2	
Day 3	

Let Us Do

1. Complete the table.

Items	Total Sold Items
Fruit Chaats	
Sandwiches	

2. On which day were the most sandwiches sold?
3. Which item had the highest sale on Day 2?
4. Complete the table given below. Circle the day that had the highest sales.

Day	Total Sales
Day 1	
Day 2	
Day 3	

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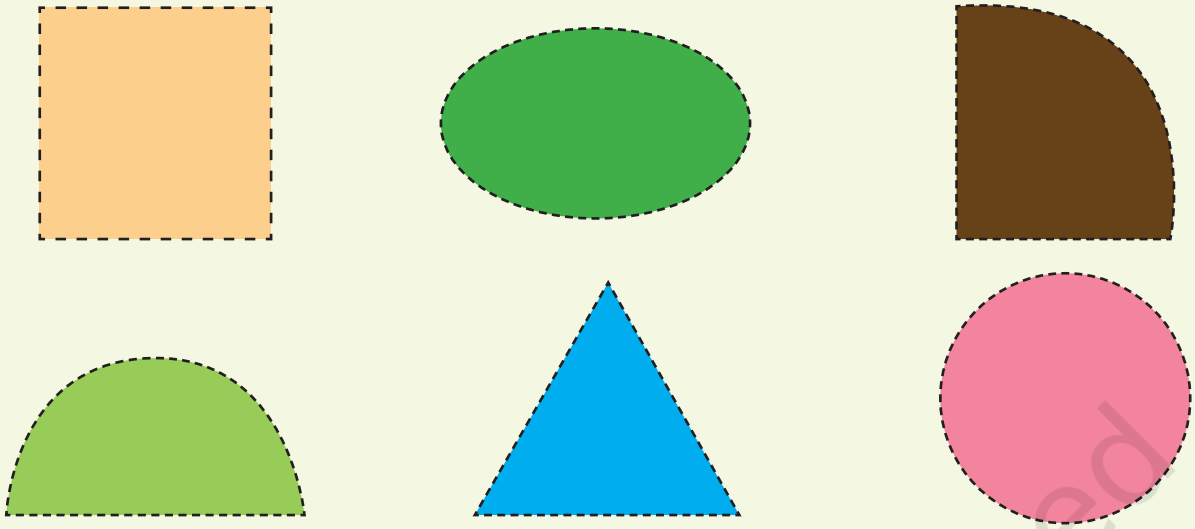
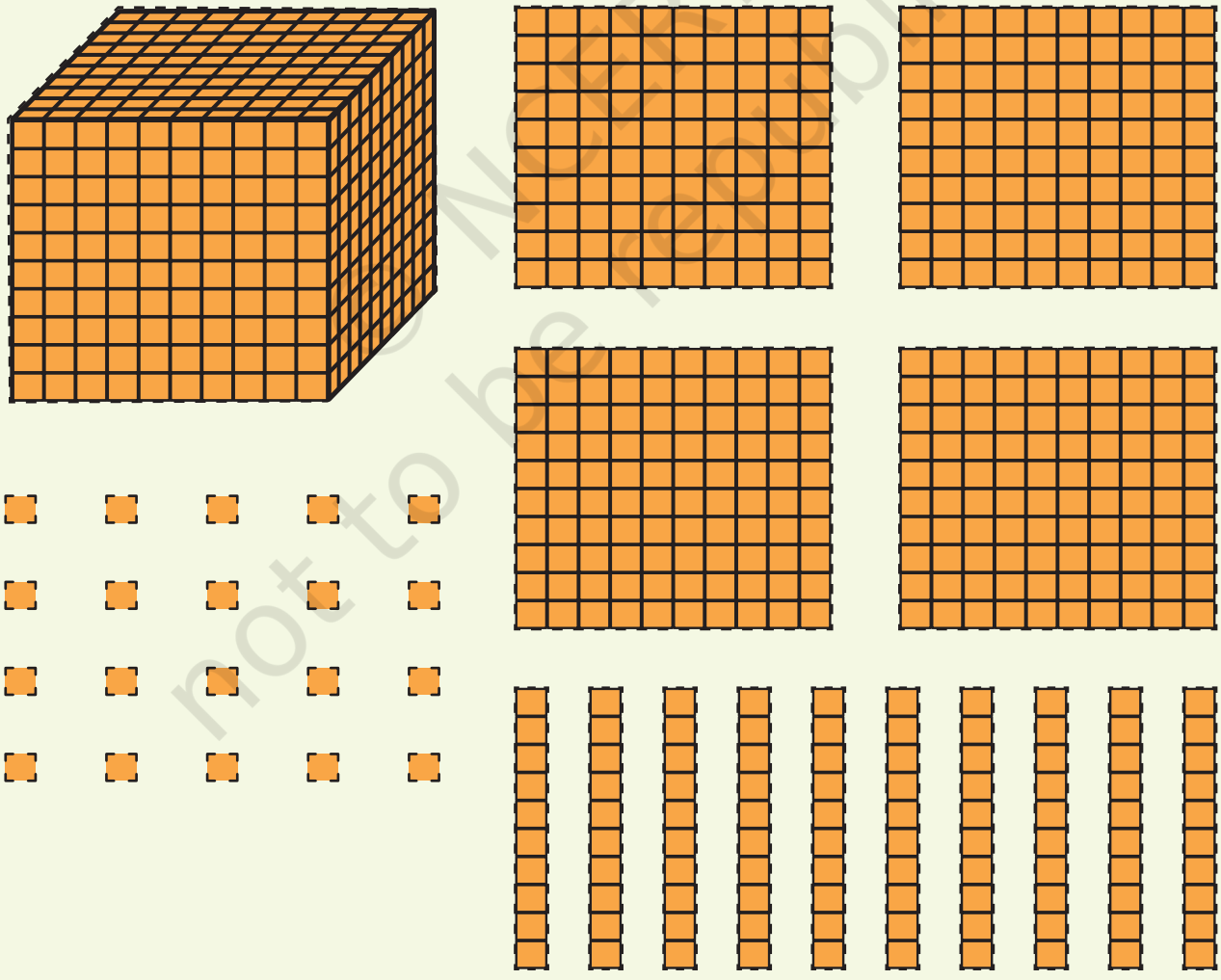
2D Shapes

Note: Use the shapes given below in Chapter 1



Dienes Blocks



Note: Make more Dienes blocks if needed

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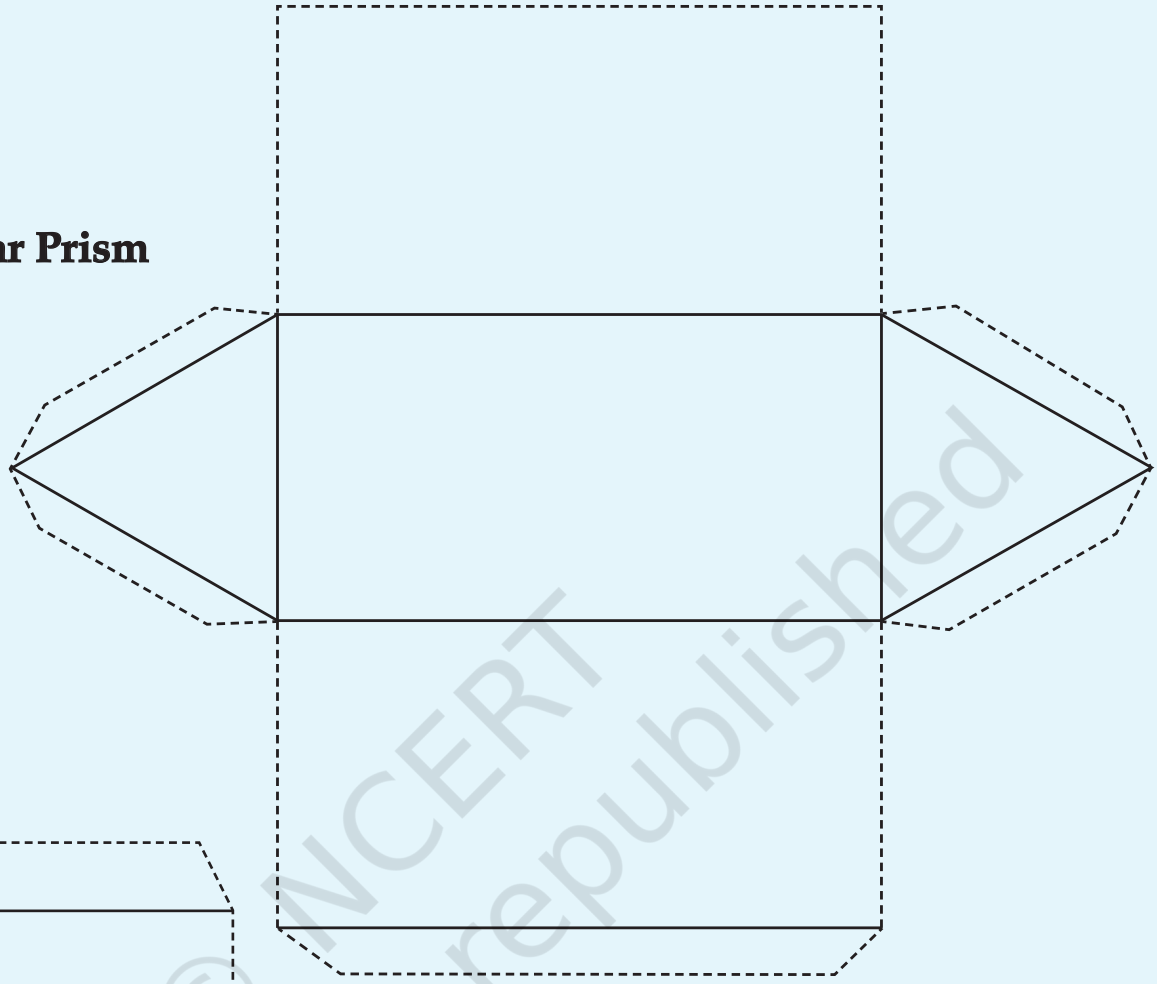
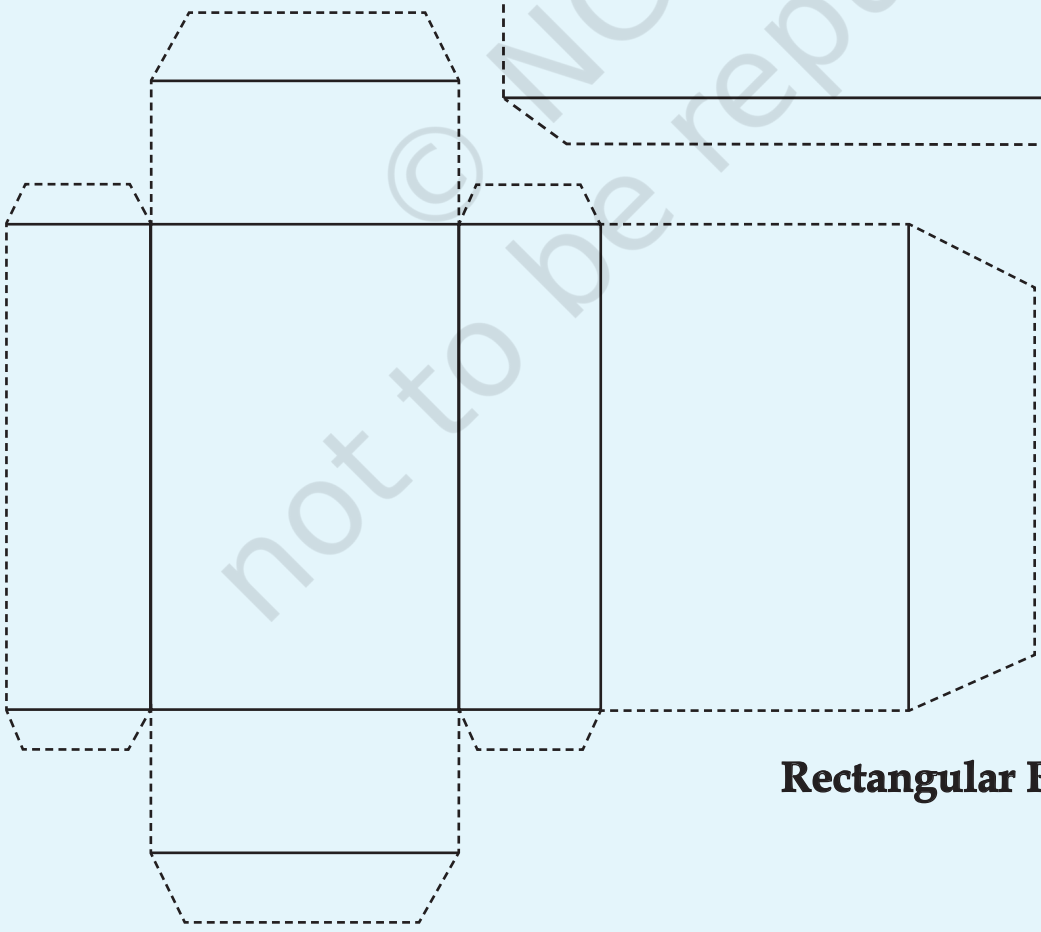
Nets of a Triangular Prism and Rectangular Prism/Cuboid

Note: Cut along the dotted lines and fold along the dark lines.

Triangular Prism





Rectangular Prism / Cuboid

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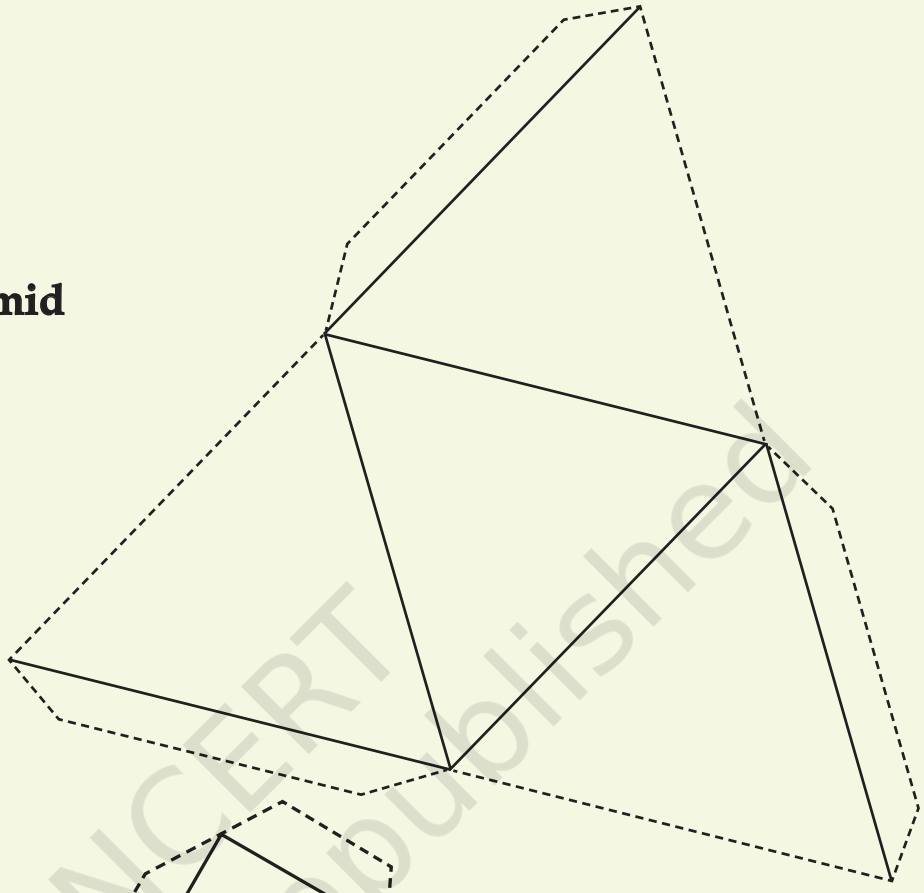
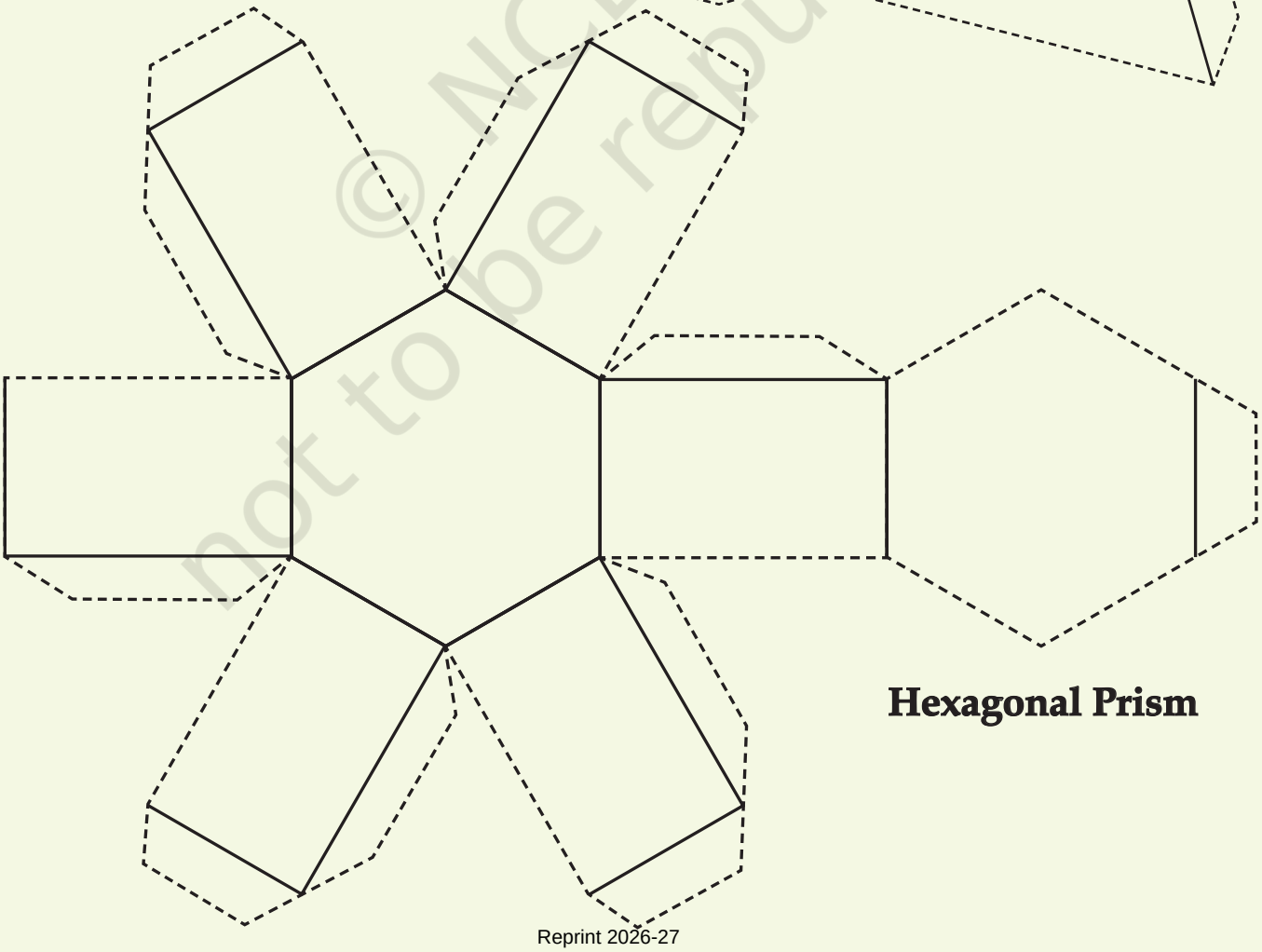
Nets of a Triangular Pyramid and Hexagonal Prism

Note: Cut along the dotted lines and fold along the dark lines.

Triangular Pyramid





Hexagonal Prism

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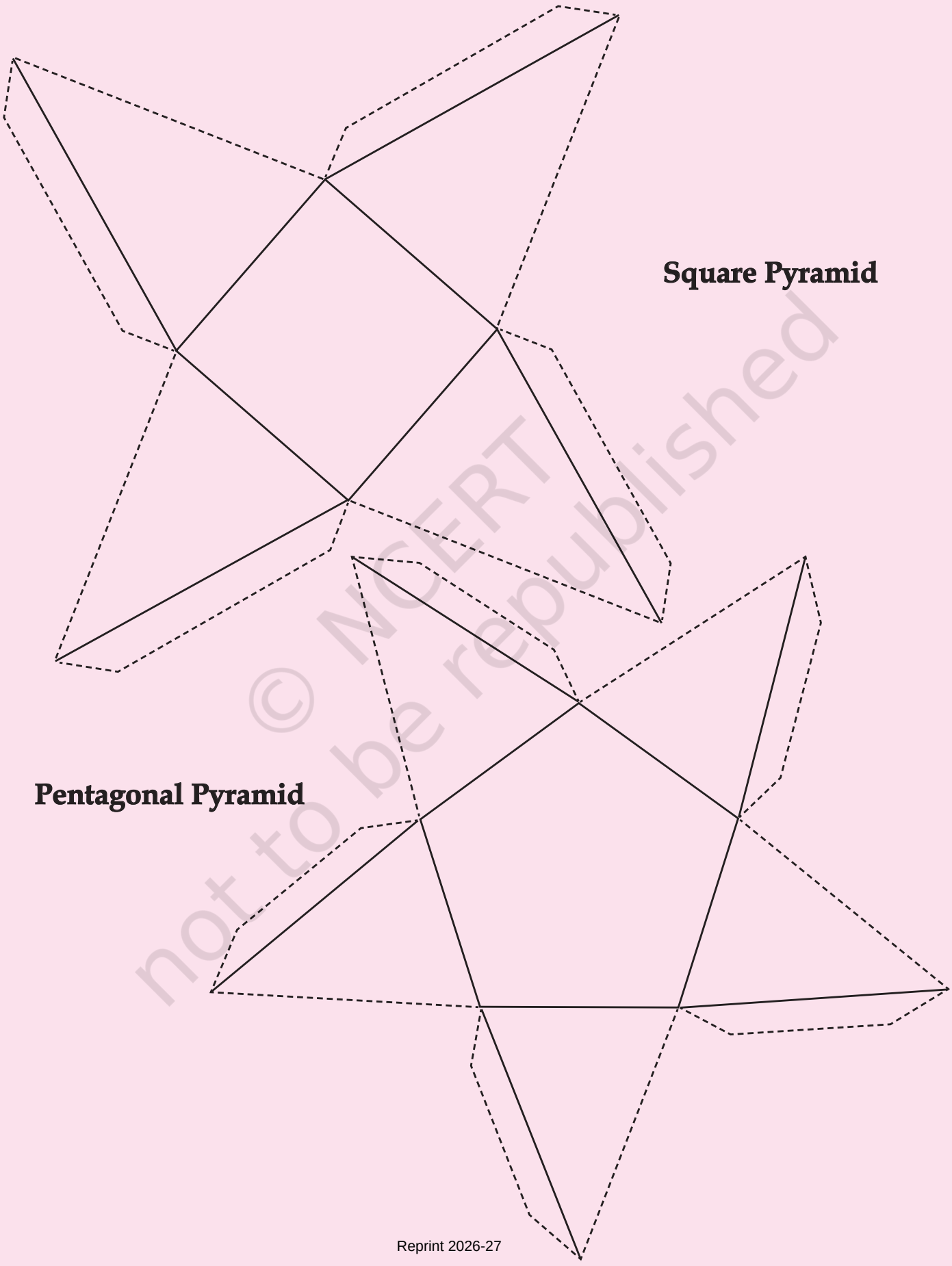
Nets of a Square Pyramid and Pentagonal Pyramid

Note: Cut along the dotted lines and fold along the dark lines.



Square Pyramid

Pentagonal Pyramid

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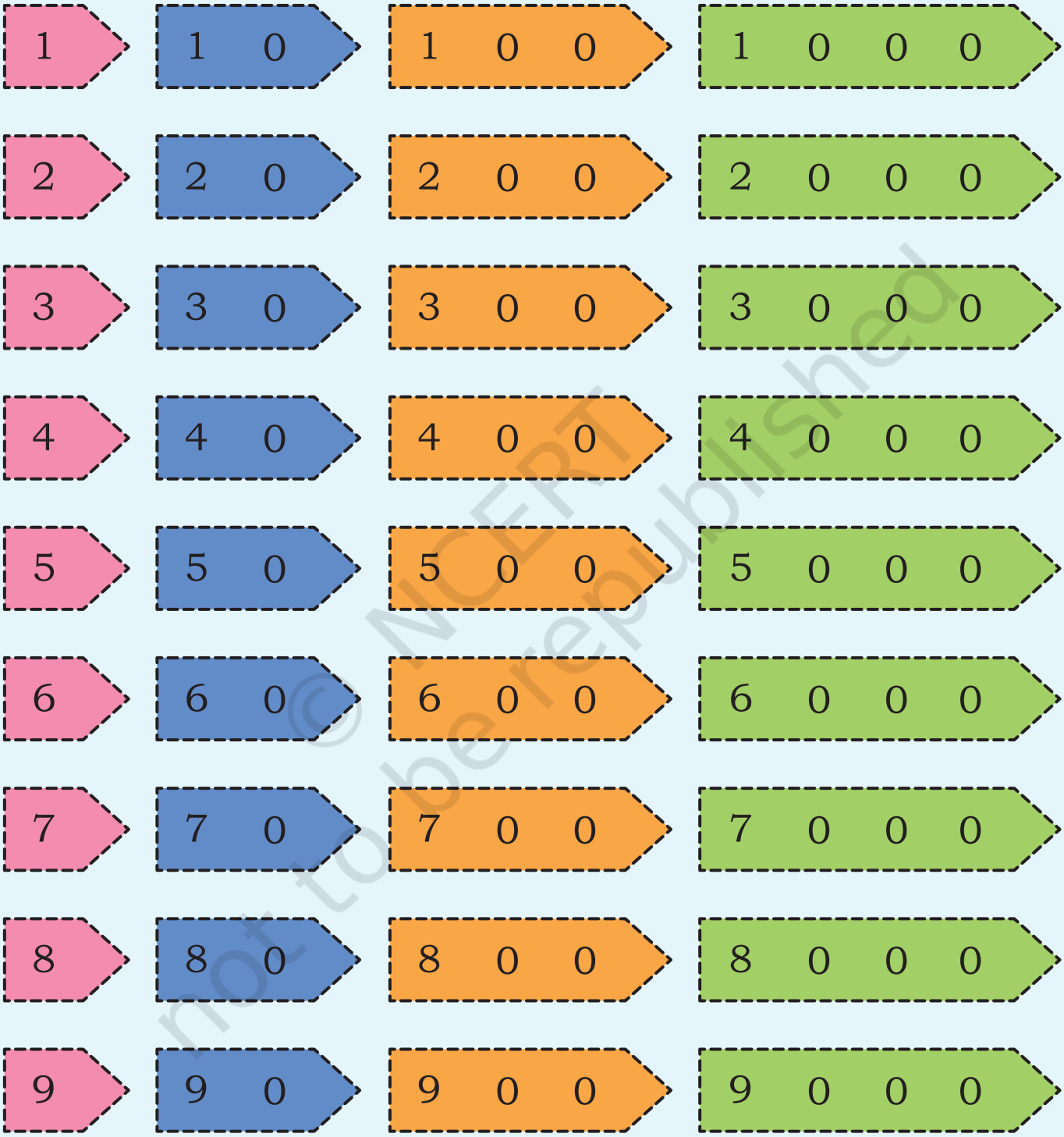
Arrow Cards



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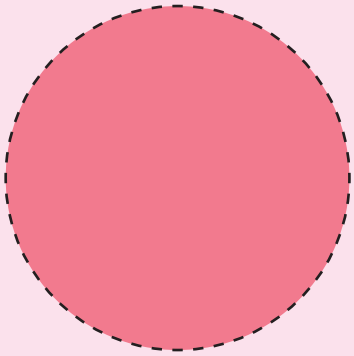
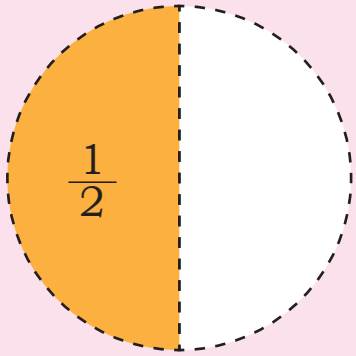
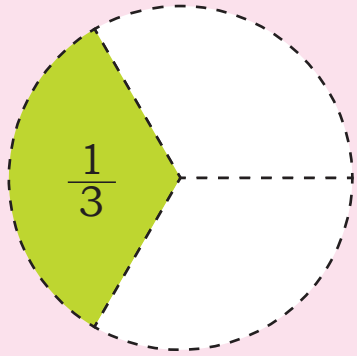
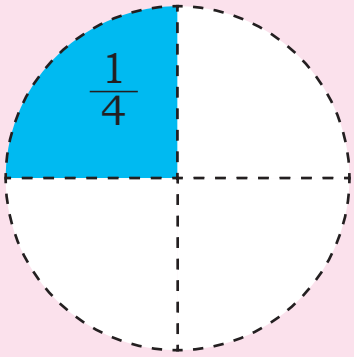
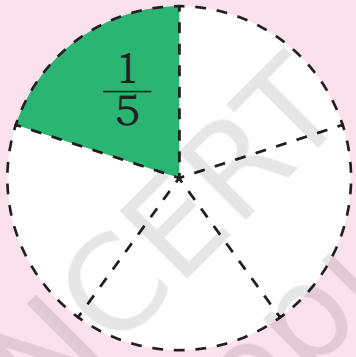
Fraction Kit

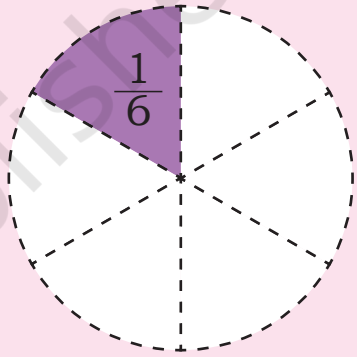


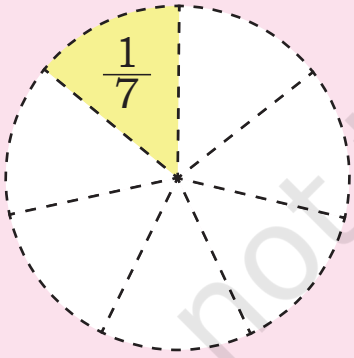


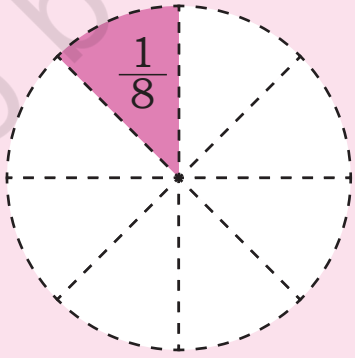


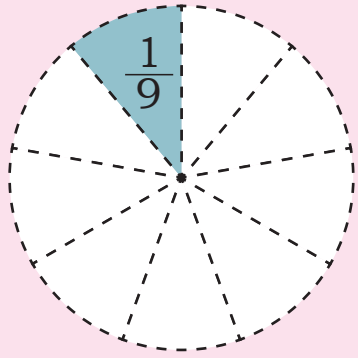












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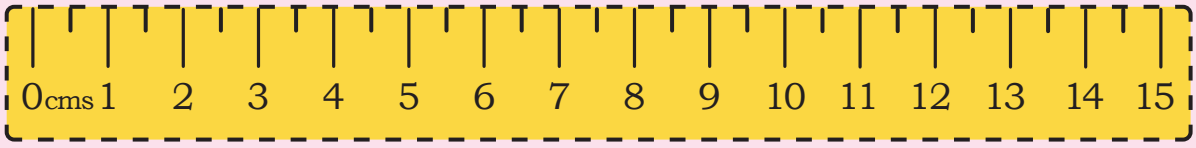
Cm Scale



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Number Tokens

1000 1000 1000 1000 1000

1000 1000 1000 1000

100 100 100 100 100

100 100 100 100 100

100 100 100 100 100

100 100 100 100 100

10 10 10 10 10 10 10

10 10 10 10 10 10 10

10 10 10 10 10 10

1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1

1 1 1 1

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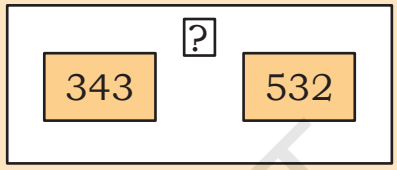
Note for Teachers

Box diagrams help students decode word problems as well as find strategies to solve them. The following examples are typical of all word problems in addition and subtraction. The operation that needs to be carried out can be decided depending on which boxes are filled in any problem. The three types of problems are combine, compare and change. Each problem can be represented using a slightly different box diagram so that one can capture the problem fully.

Example 1: Combine: Involves two different sets/collections. For example, there are 343 children in the Preparatory Stage and 532 in the Middle Stage in a school. How many total children are there in these two stages?

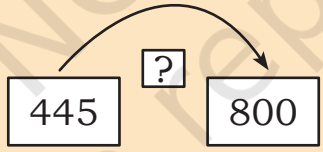
343 + 532 = ?



Example 2: Change: Involves change in an existing set/quantity. For example, I have 445 in my piggy bank. After three months, I ended up with 800 in the bank. How much has the amount in my bank increased in three months?

445 + ? = 800

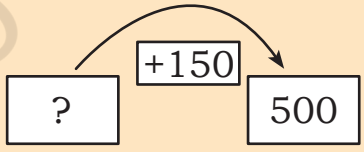
800 – 445 = ?



Example 3: Change: There are some potatoes in Sohan's shop. He bought 150 kg more and now has 500 kg of fresh and old potatoes. How many kg of potatoes did he have initially?

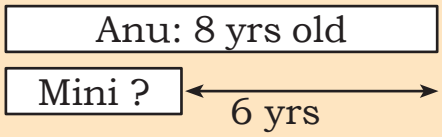
? + 150 = 500

500 – 150 = ?



Example 4: Compare: Involves comparing two quantities. For example, Anu is 6 years older than her sister Mini. Anu is 8 years old now. How old is Mini?

8 = ? + 6



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NOTE

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